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ENUMERATION

OF

ALL THE PLANTS KNOWN

FROM

CHINA PROPER, FORMOSA, HAINAN, THE COREA, THE LUCHU ARCHIPELAGO,

AND

THE ISLAND OF HONGKONG;

TOGETHER WITH THEIR

DISTRIBUTION AND SYNONYMY.

(*Continued from* VOL. XXIII.)

72. STYLIDIEÆ.

1. **Stylidium uliginosum,** *Swartz in Mag. Nat. Freunde*, 1807, p. 52, t. 2. f. 4; *DC. Prodr.* vii. p. 336; *Benth. Fl. Hongk.* p. 195; *Hook. f. Fl. Brit. Ind.* iii. p. 420.

Stylidium sinicum, *Hance in Walp. Ann.* ii. p. 1030.

KWANGTUNG: Pakhoi (*Playfair* !); HONGKONG (*Wright* ! *Wilford* ! *Champion* !). Mus. Brit.; Herb. Kew.

Ceylon and North-east Australia; and the closely allied species or variety, *S. Kunthii*, inhabits Eastern India and Malaya.

73. GOODENOVIEÆ.

1. **Calogyne chinensis,** *Benth. in Journ. Linn. Soc.* v. p. 78; *Hance in Journ. Bot.* 1871, p. 202.

FOKIEN: Amoy (*Hance*, 1422 !). Mus. Brit.; Herb. Kew.

1. **Scævola Kœnigii,** *Vahl, Symb.* iii. p. 36; *Benth. Fl. Austral.* iv. p. 86; *Hook. f. Fl. Brit. Ind.* iii. p. 421; *Engler, Bot. Jahrb.* vi. p. 68; *Bot. Mag.* t. 2732.

Scævola Lobelia, *Benth. Fl. Hongk.* p. 198, *non Linn.*

Scævola latevaga, *Hance in Walp. Ann.* ii. p. 1054.

HONGKONG (*Wright*! *Champion*! *Wilford*!); PRATAS ISLAND (*Wilford*!); FORMOSA: Takow (*Playfair*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

2. **Scævola hainanensis,** *Hance in Journ. Bot.* 1878, p. 229.

HAINAN (*Bullock*, hb. *Hance*!). Mus. Brit.

We have not verified the genus of this by dissecting the flowers; but assuming it to be correctly referred here, it is a very distinct and interesting addition to the genus, especially in its geographical range, apart from the two widely-spread species.

74. CAMPANULACEÆ: LOBELIEÆ.

1. **Pratia begonifolia,** *Lindl. Bot. Reg.* t. 1373; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 422.

Piddingtonia Nummularia, *DC. Prodr.* vii. p. 341; *Benth. Fl. Hongk.* p. 196.

Lobelia begoniæfolia, *Wall. in As. Res.* xiii. p. 377.

FORMOSA: north-east (*Wilford*!), Tamsui (*Oldham*, 210!), Kelung (*Ford*!); HUPEH: Nanto (*A. Henry*!); SZECHUEN: Mount Omei (*Faber*!); KWANGTUNG: Lofaushan (*Ford*!); HONGKONG (*Champion*!). Mus. Brit.; Herb. Kew.

Eastern India and Malaya.

1. **Lobelia affinis,** *Wall. in DC. Prodr.* vii. p. 360; *Benth. Fl. Hongk.* p. 197, in nota sub *L. trigona*; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 424; *Hance in Journ. Linn. Soc.* xiii. p. 109.

Lobelia trigona, *Benth. Fl. Hongk.* 196, partim, vix *Roxb.*

KWANGTUNG: Dane's Island, Whampoa (*Hance*, 1094!); HONGKONG (*Champion*! *Wilford*!). Mus. Brit.; Herb. Kew.

Widely spread in India southward to Ceylon and in Malaya.

2. **Lobelia chinensis,** *Lour. Fl. Cochinch.* p. 514; *DC. Prodr.* vii. p. 360; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 423, in nota sub *L. trigona*; *Hance in Journ. Linn. Soc.* xiii. p. 110.

KWANGTUNG: in humid localities near Canton (*Hance*, 634!)

Pakhoi (*Playfair*!); HONGKONG (*Champion*!). Mus. Brit.; Herb. Kew.

Mr. Bentham regarded this and *L. affinis* as varieties of *L. trigona*, Roxb.; but Dr. Hance, who had ample opportunities of seeing them growing, retains them as distinct species; and Mr. Clarke follows him. He also regarded *L. trialata*, Ham., as the same species.

3. **Lobelia pyramidalis**, *Wall. in Asiat. Res.* xiii. p. 376; *DC. Prodr.* vii. p. 381; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 426; *Bot. Mag.* t. 2387.

Rapuntium pyramidale, *Presl*, et R. Wallichianum, *Presl, Prodr. Lobel.* pp. 23, 24.

Lobelia Davidii, *Franchet, Pl. David.* p. 191.

KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Amoy interior (*Swinhoe*!); HUPEH: Ichang, Nanto and immediate neighbourhood (*A. Henry*!). Herb. Kew.

Mountains of Northern and Eastern India and Birma.

We have seen no authenticated specimen of Franchet's *L. Davidii*, concerning which he says: "Anne tantum *L. pyramidalis* varietas insignis?"; but the copious specimens from the same region in the Kew Herbarium leave no doubt that his suggestion is correct.

4. **Lobelia radicans**, *Thunb. in Trans. Linn. Soc.* ii. p. 330; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 425.

Lobelia campanuloides, *Thunb loc. cit.* p. 331; *Bot. Reg.* t. 733.

Rapuntium cæspitosum, *Presl*, R. campanuloides, *Presl*, et R. radicans, *Presl, Prodr. Lobel.* pp. 13, 14.

Isolobus campanuloides, *A. DC. Prodr.* vii. p. 353; *Franch. et Savat. Enum. Pl. Jap.* i. p. 274.

Isolobus radicans, *A. DC. Prodr.* vii. p. 353; *Franchet, Pl. David.* p. 192.

Isolobus Roxburghianus, *A. DC. Prodr.* vii. p. 353.

Pratia radicans, *G. Don*, et P. Thunbergii, *G. Don, Gen. Syst.* iii. p. 700.

Isolobus Kerii, *A. DC. Prodr.* vii. p. 353.

CHINA: without locality (*Potts*!); FORMOSA: north-east (*Wilford*, 529!); HUPEH: Ichang (*A. Henry*!); SZECHUEN: Mount Omei and near Chungking (*Faber*!); KWANGTUNG (*Hance*, 10774!); HONGKONG (*Ford*!). Mus. Brit.; Herb. Kew.

Eastern India, Java, and Japan.

Franchet retains Thunberg's two species, though he admits that they are exceedingly near. We have failed to distinguish two, to say nothing of the third one based by De Candolle on the figure in the 'Botanical Register.'

5. **Lobelia sessilifolia**, *Lamb. in Trans. Linn. Soc.* x. p. 260, t. 6; *DC. Prodr.* vii. p. 380; *Franch. et Savat. Enum. Pl. Jap.* i. p. 275; *Maxim. Prim. Fl. Amur.* p. 183; *Ledeb. Fl. Ross.* ii. p. 869.

COREA: Chemulpo (*Carles*!); COREAN ARCHIPELAGO: Green Island (*Oldham*, 492!). Herb. Kew.

Dahuria to Kamtschatka and Japan.

74. CAMPANULACEÆ: CAMPANULEÆ.

1. **Wahlenbergia gracilis**, *A. DC. Monogr. Camp.* p. 142; *Prodr.* vii. p. 433; *Benth. Fl. Austral.* iv. p. 137; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 429; *Franchet, Pl. David.* p. 192.

Wahlenbergia agrestis, *A. DC. Monogr. Camp.* p. 145; *Prodr.* vii. p. 434; *Benth. Fl. Hongk.* p. 197; *Miquel in Journ. de Bot. Néerl.* i. p. 110.

Wahlenbergia marginata, *A. DC. Monogr. Camp.* p. 143; *Prodr.* vii. p. 433; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 29; *Franch. et Savat. Enum. Pl. Jap.* i. p. 277.

Wahlenbergia dehiscens, *A. DC.*, W. Sieberi, *A. DC.*, W. lavandulæfolia, *A. DC.*, et W. quadrifolia, *A. DC.*, *ex Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 429.

CHINA: without locality (*Fortune*, 70!); KIANGSU: Shanghai (*Faber*! *Carles*!); FOKIEN: Amoy (*Perry*!); FORMOSA: without locality (*Swinhoe*!), Tamsui (*Oldham*, 211!); HUPEH: Ichang (*A. Henry*!); SZECHUEN: Mount Omei at 3000 feet (*Faber*!); KWANGTUNG: Pakhoi (*Playfair*! *Johnston*!); HONGKONG (*Hinds*! *Wright*! *Champion*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Common throughout India, Eastern Asia, and Australia; and also found in New Zealand and South Africa.

5186 Var.? **misera**, *Hemsl.*; cæspitosa, pedunculis sæpissime unifloris.

KWANGTUNG: Lantao Island (*Ford*!). Herb. Kew.

At first sight this looks very different from *W. gracilis*, of which, however, it may be a starved condition.

2. **Wahlenbergia homallanthinum,** *A. DC. Prodr.* vii. p. 425; *Ledeb. Fl. Ross.* ii. p. 871.

Platycodon homallanthinum, *A. DC. Monogr. Camp.* p. 126.

North China (*Staunton* in herb. Banks ex *DeCandolle*). Mus. Brit.

Siberia and Kamtschatka.

There is no authenticated specimen of this plant in the London herbaria, though Mr. Britten found what we supposed might be the specimen alluded to by DeCandolle.

1. **Platycodon grandiflorus,** *A. DC. Monogr. Camp.* p. 125; *Prodr.* vii. p. 422; *Walp. Ann.* ii. p. 1040; *Debeaux, Fl. Tchef.* p. 92; *Franchet, Pl. David.* p. 193; *Hance in Journ. Bot.* 1874, p. 261; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 231 (var. α. Candolleanus *et* β. chinensis); *Ledeb. Fl. Ross.* ii. p. 870; *Sweet, Brit. Fl. Gard.* ser. 2, t. 208.

Platycodon chinensis, *Lindl. et Paxt. Fl. Gard.* ii. p. 121, t. 61.

Platycodon autumnalis, *Decne. in Rev. Hort.* 1848, p. 361, cum ic. color., et *in Lem. Jard. Fleur.* t. 250.

Platycodon sinensis, *Lem. Jard. Fleur.* iii. sub tab. 250.

Wahlenbergia grandiflora, *Schrad. in Cat. Hort. Goett.* 1814, ex *A. DC.*; *Benth. Fl. Hongk.* p. 197.

Campanula grandiflora, *Jacq. Hort. Vindob.* iii. p. 4, t. 2.

Campanula gentianoides, *Lam. Encycl.* i. p. 781.

Chihli and Corea to Hupeh, Kwangtung, and Hongkong: all collectors! Mus. Brit.; Herb. Kew.

Dahuria to Mandshuria and Japan.

1. **Codonopsis convolvulacea,** *Kurz in Journ. Bot.* 1873, p. 195.

Yunnan: Hotha (*Anderson* ex *Kurz*).

2. **Codonopsis lanceolata,** *Benth. et Hook. f. Gen. Pl.* ii. p. 557; *Trautv. in Acta Horti Petrop.* vi. p. 46, excl. var. ussuriensis; *Hance in Journ. Bot.* 1885, p. 325.

Campanumœa lanceolata, *Sieb. et Zucc. Fl. Jap.* i. p. 174, t. 91.

Glossocomia lanceolata, *Regel in Bull. Phys.-Math. Acad. Pétersb.* xv. p. 223; *Maxim. in Mél. Biol.* xii. p. 487.

Glossocomia hortensis, *Rupr. in Bull. Phys.-Math. Acad. Pétersb.* xv. p. 209.

Chihli: Peking (*Bretschneider* !); Kiangsi: Kiukiang (*Shearer* !); Hupeh: Ichang and immediate neighbourhood

(*A. Henry*, 2342 !); Kwangtung: Lofaushan (*Faber* !). Mus. Brit.; Herb. Kew.

Southern Mandshuria and Japan.

3820 3. **Codonopsis ussuriensis**, *Hemsl.*

Glossocomia ussuriensis, *Rupr. et Maxim. in Bull. Phys.-Math. Acad. Pétersb.* xv. p. 209; *Maxim. Prim. Fl. Amur.* p. 184, et *in Mél. Biol.* xii. p. 487.

Glossocomia lanceolata, *Regel, Fl. Ussur.* n. 316, *non Maxim.*

Codonopsis lanceolata, *var.* ussuriensis, *Trautv. in Acta Horti Petrop.* vi. p. 47.

North China (ex *Maximowicz*).

Mandshuria and Japan.

4. **Codonopsis viridiflora**, *Maxim. in Mél. Biol.* xi. p. 258.

Kansuh: high alpine region (*Przewalski* ex *Maximowicz*).

1. **Cyananthus Delavayi**, *Franchet in Morot's Journ. de Bot.* i. 1887, p. 280.

Cyananthus barbatus, *Franchet in Bull. Soc. Bot. France,* xxxii. p. 9, *non Edgew.*

Yunnan: mountains of Heechanmen above Lankong, at 3000 metres (*Delavay* ex *Franchet*). Herb. Kew.

2. **Cyananthus Hookeri**, *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 435; *Franchet in Morot's Journ. de Bot.* i. 1887, p. 281 (varietates levicaulis *et* hispidus).

Yunnan: alpine pastures of Heechanmen near Hokin, at 2500 to 3500 metres (*Delavay* !). Herb. Kew.

India: Nepal.

3. **Cyananthus incanus**, *Hook. f. et Thoms. in Journ. Linn. Soc.* ii. p. 20; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 434; *Franchet in Morot's Journ. de Bot.* i. 1887, p. 279 (varietas leiocalyx).

Yunnan: alpine meadows of the Tsangchan mountain above Tali at 4000 metres (*Delavay* !). Herb. Kew.

India: Sikkim at 12,000 to 16,000 feet (var. *trichocalyx*, Franchet).

There is one piece of Franchet's var. *leiocalyx* among the Indian specimens in the Kew Herbarium.

4. **Cyananthus inflatus**, *Hook. f. et Thoms. in Journ. Linn. Soc.* ii. p. 21; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 435; *Franchet in Morot's Journ. de Bot.* i. 1887, p. 281 (varietates tenuis et rufus).

YUNNAN: in various localities at 2500 to 3200 metres (*Delavay*, 146!). Herb. Kew.

India: Sikkim, general at 11,000 to 16,000 feet.

5. **Cyananthus longiflorus**, *Franchet in Morot's Journ. de Bot.* i. 1887, p. 280.

YUNNAN: Heechanmen mountain above Lankong (*Delavay*, 96!). Herb. Kew.

Mr. Franchet has left out, in the place cited, the locality and number, which are taken from the label accompanying the specimen presented to the Kew Herbarium.

6. **Cyananthus macrocalyx**, *Franchet in Morot's Journ. de Bot.* i. 1887, p. 279.

YUNNAN: Koulapo mountain near Hokin and Heechanmen above Lankong, at 3500 metres (*Delavay*!). Herb. Kew.

The Kew specimen bears no number; but Franchet cites 96, the number under which we have *C. longiflorus*.

1. **Campanumœa axillaris**, *Oliv. in Hook. Ic. Plant.* xviii. t. 1775.

Codonopsis truncata, *Wall. Cat.* 1301; *A. DC. Monogr. Camp.* p. 122; *Prodr.* vii. p. 423.

Cyclocodon truncatus, *Hook. f. et Thoms. in Journ. Linn. Soc.* ii. p. 18.

Cyclocodon adnatus, *Griff. Notulæ.* iv. p. 278?

Campanumœa celebica, *Clarke in Hook. f. Fl. Brit. Ind.* pro parte.

FOKIEN: Amoy interior (*Swinhoe*!); SZECHUEN: Mount Omei at 5000 feet (*Faber*!). Herb. Kew.

Birma.

Wallich's Birma specimens (Cat. 1301) are certainly the same as the Chinese plant; probably also specimens in the Kew Herbarium from Mergui, *Griffith*, Assam, *Griffith*, Pegu, *Kurz*, and Sikkim, *Treutler*. What name this species should bear under this genus must be left undecided at present, as the synonymy is so very much involved. Kurz (Journ. As. Soc. Beng. xlvi. 2, p. 210) unites *Cyclocodon distans*, Griff. (Ic. Pl. Ind.

Or. t. 481), with *Cyclocodon truncatus*, Hook. f. & Thoms.; and Clarke, *loc. cit.*, recognizes only two: one with a free calyx (involucre of A. DeCandolle), and the other with the calyx more or less adnate to the ovary, as in the present one. The specimens excluded here referred to *Campanumœa celebica* by Clarke have the leaves glaucous beneath and a loose terminal inflorescence.

2. **Campanumœa javanica,** *Blume, Bijdr.* p. 727; *DC. Prodr.* vii. p. 423; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 435; *Flore des Serres*, t. 1264.

Codonopsis javanica, *Hook. f. Illustr. Himal. Pl.* t. 16.

Codonopsis cordata, *Hook. Bot. Mag.* t. 5372.

Campanumœa japonica, *Maxim. in Mél. Biol.* vi. p. 268.

HUPEH: Ichang, Nanto and neighbourhood (*A. Henry* !); SZECHUEN: Mount Omei at 4000 feet (*Faber* ?). Herb. Kew.

Mountains of Eastern Birma, and Java; and also found in Japan.

The Indian specimens differ as much from each other as they do from the Chinese, and we can only regard them as varieties of one species.

3. **Campanumœa pilosula,** *Franchet, Pl. David.* pp. 192 et 193, ubi sphalmate *C. villosula.*

CHIHLI: mountains near Peking (*David* ex *Franchet*).

Mongolia and perhaps South Mandshuria.

Specimens in the Kew Herbarium collected by Mr. H. E. M. James in Southern Mandshuria are probably this species.

1. **Sphenoclea zeylanica,** *Gærtn. Fruct.* i. p. 113, t. 24. f. 5; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 438.

Sphenoclea Pongatium, *A. DC. Prodr.* vii. p. 548; *Wight, Illustr. Ind. Bot.* t. 138.

Pongatium indicum, *Lam. Illustr.* ii. t. 444.

Rapinia herbacea, *Lour. Fl. Cochinch.* p. 127.

FORMOSA: Tamsui (*Oldham*, 445 !), Takow (*Playfair* !); KWANGTUNG: Lantao Island (*Ford* !). Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, and America.

1. **Campanula canescens,** *Wall.* 1289; *A. DC. Prodr.* viii. p. 473; *Boiss. Fl. Or.* iii. p. 934; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 439; *Franchet, Pl. David.* p. 193.

HUPEH: Nanto and mountains to the northward (*A. Henry* !); SHENSI: Hanchongfou in the southern part of the province (*David* ex *Franchet*). Herb. Kew.

Common from Afghanistan through Northern India to Pegu, and in Ceylon.

2. **Campanula circæoides,** *Fr. Schmidt, Reisen in Amurl.* p. 154, t. 3. ff. 14–19; *Franch. et Savat. Enum. Pl. Jap.* i. p. 278; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 195.

HUPEH: Ichang and immediate neighbourhood (*A. Henry* !). Herb. Kew.

Mandshuria and Japan.

3. **Campanula colorata,** *Wall. Cat.* 1827, et *in Roxb. Fl. Ind., ed. Carey et Wallich,* ii. p. 101; *A. DC. Prodr.* vii. p. 473; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 440.

SZECHUEN: near Chungking (*Faber* !); YUNNAN (*Bourne* !). Herb. Kew.

Afghanistan through Northern India to the Khasia hills.

The Chinese specimens are imperfect, and therefore it is a little doubtful whether they are specifically the same as the Indian. Hance's *C. veronicifolia* is almost certainly the same.

4. **Campanula fulgens,** *Wall. Cat.* 1823, et *in Roxb. Fl. Ind. ed. Carey et Wall.* ii. p. 99; *A. DC. Prodr.* vii. p. 477; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 442; *Hance in Journ. Bot.* 1885, p. 325; *Wight, Illustr. Ind. Bot.* t. 136, et *Ic. Pl. Ind. Or.* t. 1179.

KWANGTUNG: North river (*B. C. Henry*, hb. *Hance* !). Mus. Brit.

Mountains of Northern and Eastern India, of the Deccan peninsula, and of Ceylon.

5. **Campanula glomerata,** *Linn. Sp. Pl.* ed. 1, p. 166; *DC. Prodr.* vii. p. 467; *Maxim. Prim. Fl. Amur.* p. 185.

SHINGKING: Peiling and other localities (*Webster* !); COREA: Chemulpo (*Carles* !). Herb. Kew.

Western Europe to Persia, and through Siberia to Mandshuria.

6. **Campanula punctata,** *Lam. Encycl.* i. p. 586; *DC. Prodr.* vii. p. 465; *Ledeb. Fl. Ross.* ii. p. 878; *Baker et S. Moore in Journ.*

Linn. Soc. xvii. p. 384; *Franchet, Pl. David.* p. 194; *Franch. et Savat. Enum. Pl. Jap.* i. p. 277; *Bot. Mag.* t. 1723.

Campanula nobilis, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 232; *Bot. Reg.* 1846, t. 65; *Flore des Serres,* tt. 247 et 563; *Rev. Hort.* 2e série, v. (1846), p. 283.

CHIHLI: Jehol (*David,* 1858, ex *Franchet*); SHINGKING: hills north of Moukden (*Webster*!), Chienshan (*Ross*!), between Moukden and Tungcheshien (*James*!); FOKIEN: Amoy, cult. (*Fortune,* 105!); SHENSI or KANSUH: Tsunglin range (*Piasezki* ex *Maximowicz* in litt.); COREA: Chemulpo (*Carles*!), west coast (*Perry*!). Mus. Brit.; Herb. Kew.

Dahuria to Mandshuria and Japan.

Mr. Fortune introduced this plant into Europe from Chinese gardens; and it does not appear that he ever met with it in a wild state. It was cultivated in 1815 by Lambert, who raised it from Siberian seeds.

7. **Campanula veronicifolia,** *Hance in Journ. Bot.* 1871, p. 133.

KWANGTUNG: North river (*Sampson,* hb. *Hance*!); SHENSI (*Piasezki,* ex *Maximowicz* in litt.). Mus. Brit.

Hance says, "very closely allied to *C. colorata,* Wall."; and there is little doubt that it is actually the same.

1. **Phyteuma japonicum,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 192; *Franch. et Savat. Enum. Pl. Jap.* i. p. 277; *Herder in Pl. Radd.* iv. 1. p. 23.

COREA: Soul mountains (*Carles*!). Herb. Kew.

Mandshuria and Japan.

This is very near the Caucasian *P. campanuloides*; and is one of those species connecting this genus with *Campanula,* and constituting G. Don's section *Podanthum,* which Boissier has raised to generic rank.

4570 1. **Adenophora capillaris** *, *Hemsl.,* n. sp.

Herba elegantissima, perennis (?), erecta, circiter 3-pedalis,

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* In addition to the new Chinese species here described, there is a very distinct one in the Kew Herbarium, collected between Kirin and Tsitsihar, Mandshuria, by Mr. H. E. M. James.

3889 ADENOPHORA STENOPHYLLA, *Hemsl.,* n. sp.

Suffrutex vel herba lignosa pedalis vel forsan ultra, caulibus gracilibus puberulis supra ramulis lateralibus brevibus floriferis, foliis confertis linearibus

undique glabra vel cito glabrescens, caulibus teretibus, ramulis gracilibus. *Folia* radicalia desunt, caulina membranacea, lanceolata, in petiolum brevem attenuata, usque ad 6 poll. longa, longe acuminata, acutissima, inæqualiter serrata, venis primariis lateralibus paucis inter se anastomosantibus. *Flores* albi (*Henry*), circiter 9 lineas longi, laxe paniculati, pedicellis capillaribus; calycis lobi capillares, corolla dimidio breviores; corolla angusta, medio leviter inflata, ore leviter constricto, breviter 5-dentata; stamina inclusa, filamentis infra medium dilatatis, marginibus dense albo-ciliatis arcte applicatis; discus cylindricus, glaber, longissimus; stylus puberulus, dimorphus, nunc filiformis, longe exsertus, nunc apice clavatus inclusus. *Fructus* trilocularis, lævis, seminibus brunneis oblongis concavo-convexis.

HUPEH: Patung district (*A. Henry*, 954, 4799!). Herb. Kew.

A very distinct and beautiful species, remarkable for the exceeding slenderness of the pedicels, the narrow, somewhat inflated corolla, and the very long tubular disk.

2. **Adenophora divaricata,** *Franch. et Savat. Enum. Pl. Jap.* ii. p. 423; *Franch. in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 232.

SHANTUNG (*Fauvel* ex *Franchet*!).

Japan.

3. **Adenophora polymorpha,** *Ledeb.* ex *Herder in Pl. Radd.* iv. i. p. 24 (varietates numerosæ).

Adenophora coronopifolia, *Fisch.*, A. denticulata, *Fisch.*, A. latifolia, *Fisch.*, A. Lamarkii, *Fisch.*, A. marsupiiflora, *Fisch.*, et A. Gmelinii, *Fisch. in Mém. Soc. Nat. Mosc.* vi. pp. 165–169; *Ledeb. Fl. Alt.* i. p. 246, et *Fl. Ross.* ii. pp. 893-895; *Franchet, Pl. David.* p. 194; *Trautv. Enum. Pl. Song. Schrenck,* p. 88.

CHIHLI and SHINGKING to HUPEH, common and in all collections. Mus. Brit.; Herb. Kew.

Siberia, Mandshuria, and Japan.

Ledebour, Trautvetter, Herder, and Franchet have each attempted to dispose of the numerous forms of *Adenophora.*

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pollicaribus subobtusis hispidulis, floribus cæruleis 4–5 lineas longis breviter graciliterque pedicellatis, calycis glabri lobis brevibus subulatis, corolla late campanulata, filamentis barbatis, disco glabro, stylo vix exserto.

The somewhat crowded linear hispid leaves and small flowers distinguish this from all the other species. The narrow-leaved *A. Gmelinii*, Fisch., has glabrous leaves and flowers three times as large.

Ledebour (Fl. Alt. i. p. 246) suggests that all the above forms, together with *A. verticillata*, Fisch., and *A. communis*, Fisch., should be regarded as one species, to which he would give the name of *A. polymorpha*. Trautvetter, *loc. sup. cit.*, follows, except that he holds *A. verticillata* to be a distinct species, and Herder retains the name *polymorpha*, attributing it to Ledebour, for the species as thus restricted. Franchet and Savatier endeavour to separate some of them again (Enum. Pl. Jap. ii. pp. 421–424), but we are unable to follow them; yet the present arrangement is merely a record of the names.

4522 4. **Adenophora pubescens,** *Hemsl.*, n. sp.

Herba perennis (?), albido-pubescens, 3–4-pedalis, caulibus crassiusculis subangulatis curvatis. *Folia* caulina breviter petiolata, tenuia, lanceolata, usque ad 7 poll. longa, longe acuminata, acuta, grosse inæqualiterque serrata, supra leviter rugulosa, glabrescentia, subtus albo-pubescentia. *Flores* albi (*Henry*), in paniculas amplas laxas terminales dispositi, brevissime pedicellati; calycis pubescentis lobi ovato-lanceolati, subacuti; corolla bene evoluta non visa.

HUPEH: Nanto and mountains to the northward (*A. Henry*, 2178!). Herb. Kew.

Although the flowers of Dr. Henry's specimens are not fully developed, the plant is so distinct as a species as to be easily recognized. Dr. Henry's number 1, from Ichang, with blue flowers, is probably this species. The flowers are about 9 lines long, and the corolla rather narrow-campanulate.

5. **Adenophora remotidens,** *Hemsl.*, n. sp.

Herba, ut videtur, erecta, gracilis (caulis pars superiora florifera tantum adest), rufo-puberula. *Folia* subsessilia, crassiuscula, lanceolato-oblonga, 1–2 poll. longa, subobtusa, crenato-serrata, utrinque puberula, subtus pallidiora. *Flores* albi ?, semipollicares, anguste paniculati, pedicellis recurvis filiformibus; calycis dentes breves, subulati, distantes; corolla anguste campanulata, lobis brevibus æquilatere triangulatis; stamina vix exserta; filamenta infra medium late dilatata, barbata; discus glaber, elongatus; stylus longe exsertus. *Fructus* non visus.

COREA: Chemulpo (*Carles*!). Herb. Kew.

A distinct species in the substance and indumentum of the foliage and small flowers with short distant calyx-teeth.

6. **Adenophora remotiflora,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 193.

Campanula remotiflora, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 610.

Adenophora trachelioides, *Maxim. Prim. Fl. Amur.* p. 186; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 424; *Hance in Journ. Bot.* 1879, p. 12; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 232, et *Pl. David.* p. 195; *Debeaux, Fl. Tchef.* p. 66 (varietates cordatifolia *et* angustifolia).

Adenophora Isabellæ, *Hemsl. in Journ. Bot.* 1876, p. 207.

CHIHLI: near Peking (*Bretschneider*!), Jehol (*David*, 1971!); SHINGKING: Peiling (*Webster*!), Changpeishan (*James*!); SHANTUNG: Chefoo (*Mrs. Forbes*!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

7. **Adenophora rupincola,** *Hemsl.*, n. sp.

Herba perennis, glabrescens, caulibus gracilibus debilibus 2–4-pedalibus striatis vel subangulatis. *Folia* radicalia cordato-ovata, caulina petiolata, tenuia, primum præcipue subtus parce puberula, anguste lanceolata, usque ad 6 poll. longa, longe acuminata, acuminatissima, serrulata, venis albidis subtus conspicuis. *Flores* candidi (*Henry*), circiter 9 lineas longi, secus ramulos laterales elongatos graciles subaphyllos laxissime racemosi, pedicellis filiformibus; calycis lobi ovato-lanceolati, corolla vix dimidio breviores; corolla campanulata lobis latis brevibus; filamenta infra medium dilatata, leviter puberula; discus conicus, crassus; stylus exsertus, clavatus, puberulus. *Fructus* non visus.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 4360!), Nanto and mountains to the northward (*A. Henry*, 4476!). Herb. Kew.

Characterized by its peculiar habit; the flowers being loosely borne on long, slender, weak lateral branches. It grows, according to Dr. Henry, out of the clefts of cliffs.

8. **Adenophora sinensis,** *A. DC. Monogr. Camp.* p. 354, t. 6; *DC. Prodr.* vii. p. 492.

CHINA: without locality (*Staunton*!); SHANTUNG (*Maingay*!); KIANGSI: Kiukiang (*Shearer*!). Mus. Brit.; Herb. Kew.

There are specimens in the Kew Herbarium from the province of Hupeh that may belong to this species.

9. **Adenophora stricta,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 192; *S. Moore in Journ. Bot.* 1875, p. 231.

KIANGSI: Kiukiang (*Shearer*!). Herb. Kew.

Japan.

Perhaps not specifically different from *A. sinensis*, A. DC.

10. **Adenophora verticillata,** *Fisch. in Mém. Soc. Imp. Nat. Mosc.* vi. p. 167 ; *A. DC. Monogr. Camp.* p. 356 ; *DC. Prodr.* vii. p. 492 ; *Trautv. Enum. Pl. Song. Schrenck*, p. 89 ; *Herder, Pl. Radd.* iv. 1, p. 28 ; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 422 ; *Hance in Journ. Bot.* 1885, p. 325 ; *Sweet, Brit. Fl. Gard.* ser. 2, t. 160.

Campanula verticillata, *Pall. Itin.* iv. p. 376, t. 34.

SHINGKING : Peiling (*Webster*!); CHEKIANG : Ningpo (*Faber* !), KIANGSI : Kiukiang (*Shearer* !) ; KWANGTUNG : North river (*B C. Henry*, hb. *Hance* !); COREA : Chemulpo (*Carles* !) ; LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit. ; Herb. Kew.

Dahuria to Mandshuria and Japan.

It is difficult to determine whether certain specimens should b referred to this species or to *A. polymorpha*, var. *latifolia* ; th distinction residing in the calyx-lobes, which in *A. verticillat* should be linear ; but it fails in some cases. Possibly the form having whorled leaves referred to *A. polymorpha* are hybrids.

75. VACCINIACEÆ.

1. **Vaccinium bracteatum,** *Thunb. Fl. Jap.* p. 156 ; *DC. Prodr.* vii. p. 573 ; *Maxim. in Mél. Biol.* viii. p. 608 ; *Franch. et Savat. Enum. Pl. Jap.* i. p. 282 ; *Franchet, Pl. David.* p. 195.

Vaccinium chinense, *Champ. in Hook. Kew Journ. Bot.* iv. p. 297 ; *Walp. Ann.* v. p. 440 ; *Benth. Fl. Hongk.* p. 199.

Vaccinium Donianum, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 161.

Vaccinium Wrightii, *A. Gray in Mem. Amer. Acad.* n. s. vi. p. 398 ; *Franch. et Savat. Enum. Pl. Jap.* i. p. 282.

Vaccinium Oldhami, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 161, quoad plantam Oldhamianam in herb. Kew sub num. 501.

Vaccinium malaccense, *Wight, Ic. Pl. Ind. Or.* t. 1186, ex *Maxim.*

Andromeda chinensis, *Lodd. Bot. Cab.* t. 1648.

CHINA : without locality (*Millett* ! *Fortune*, 47 !) ; CHEKIANG : Chusan (*Jacob* !), Ningpo mountains (*Faber* ! *Cooper* !) ; KIANGSI : Kiukiang (*Shearer* !) ; FOKIEN : Amoy (*Fortune*, 92 !) ; HUPEH : Nanto and mountains to the northward (*A. Henry* !) ; KWANGTUNG ; Lofaushan (*Ford* !) ; HONGKONG (*Wright* ! *Wilford* ! *Champion* ! *Seemann* ! and others) ; LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit. ; Herb. Kew.

Japan and Eastern India.

Bentham and Maximowicz suggest that the Indian *Vaccinium neilgherrense*, Wight, *V. rotundifolium*, Wight, *V. Leschenaultii*, Wight, *V. Donianum*, Wight, and *V. Griffithianum*, Wight, may all be forms of this species, the area of which would thus be considerably extended; but more recently Clarke (Hook. f. Fl. Brit. Ind. iii. p. 454) retains most of them as species, with the remark that *V. Griffithianum* among *Vaccinia* is the most like *V. bracteatum*. Maximowicz refers *V. Oldhami*, Miq., to *V. ciliatum*, Thunb., a Japanese species hitherto not found in China proper, but the Kew specimens bearing Oldham's number cited by Miquel belong to *V. bracteatum*.

2. **Vaccinium ciliatum**, *Thunb. Fl. Jap.* p. 156; *Maxim. in Mél. Biol.* viii. p. 607; *Franch. et Savat. Enum. Pl. Jap.* i. p. 281.

Corean Archipelago: Hooper Island (*Oldham*, 502 !). Herb. Kew.

Throughout Japan.

3. **Vaccinium Henryi**, *Hemsl.*, n. sp.; species ex affinitate *V. ciliati* eoque simillima, differt foliis opacis minus conspicue venosis haud ciliatis, floribus axillaribus potius quam racemosis.

Frutex 4–10-pedalis (*Henry*), dense ramosus, ramulis annotinis foliiferis brevibus pubescentibus. *Folia* brevissime petiolata, papyracea, decidua, ovato-lanceolata, 1–2½ poll. longa, subacuta, integra, præter costam venasque primarias plus minusve pubescentes glabra. *Flores* in axillis foliorum solitarii vel interdum quasiracemosi (id est foliis superioribus gradatim minoribus temperius deciduis) brevissime pedicellati, glabri, circiter lineas 2½ longi; calycis dentes lati, breves, subobtusi; corolla conica, lobis brevibus obtusis non recurvis; stamina 10, filamentis latis liberis parce puberulis, antheris 2-tubulosis glabris exaristatis. *Fructus* niger (*Henry*), parvus, calycis lobis obscure ciliolatis appressis coronatus.

Hupeh: Patung district (*A. Henry*, 2579, 4826, 4985 !). Herb. Kew.

Dr. Henry describes the number 2579 as a tree twenty feet high, but this may have arisen through an error on the part of his Chinese collector.

4. **Vaccinium iteophyllum**, *Hance in Ann. Sc. Nat.* 4^me série, xviii. p. 223.

Fokien: without locality (*Grijs*, hb. *Hance* 6787 !); Hupeh: Nanto, Patung and neighbourhood (*A. Henry* !). Mus. Brit.; Herb. Kew.

5. **Vaccinium japonicum,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* i. p. 28, et ii. p. 160.

HUPEH: Patung district (*A. Henry*, 2826 !). Herb. Kew.

Japan.

4420 6. **Vaccinium urceolatum,** *Hemsl.*, n. sp.

Frutex V. Dunaliano similis, ramis crassiusculis petiolisque primum puberulis. *Folia* brevissime petiolata, disticha vel subdisticha, coriacea, ovato-lanceolata, $2\frac{1}{2}$–$4\frac{1}{2}$ poll. longa, longe acuteque acuminata, basi rotundata vel subcordata, integra, venis lateralibus primariis supra sat conspicuis; petiolus crassus. *Flores* parvi, racemosi, racemis axillaribus quam folia brevioribus, bracteis (cito deciduis ?) non visis, pedicellis nudis floribus longioribus; calycis lobi late ovati, obtusi; corolla urceolata, lineas 2–3 diametro; stamina 10, breviter exserta, filamentis puberulis, antheris longe bitubulosis dorso biaristatis. *Fructus* (maturus non visus) parvus, urceolatus.

SZECHUEN: Mount Omei, 3000 to 4000 feet (*Faber* !). Herb. Kew.

76. ERICACEÆ: ANDROMEDEÆ.

1. **Cassiope selaginoides,** *Hook. f. et Thoms. in Hook. Kew Journ. Bot.* vii. 1855, p. 126, t. 4; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 460.

SZECHUEN: Mount Omei (*Faber* !). Herb. Kew.

North India, in the mountains of Sikkim at 10,000 to 13,000 feet.

1. **Leucothoe,** sp. ?

HUPEH: Patung district (*A. Henry* !). Herb. Kew.

The specimen is insufficient for description, and may even not belong to this genus.

1. **Gaultheria crenulata,** *Kurz in Journ. Bot.* 1873, p. 195.

YUNNAN: Hotha (*Anderson* !). Herb. Kew.

1. **Pieris formosa,** *D. Don in Edinb. Phil. Journ.* xvii. (1834), p. 159; *DC. Prodr.* vii. p. 599; *Clarke in Hook. f. Fl. Brit. Ind.*

iii. p. 461; *Wight, Ic. Pl. Ind. Or.* t. 1200; *Franchet in Bull. Soc. Bot. France*, xxxii. p. 9.

YUNNAN: Heechanmen mountains above Lankong (*Delavay* ex *Franchet*).

Mountains of Eastern India.

2. **Pieris japonica,** *D. Don in G. Don's Gen. Syst.* iii. p. 832; *DC. Prodr.* vii. p. 599; *Hance in Journ. Bot.* 1883, p. 322.

Andromeda japonica, *Thunb. Fl. Jap.* p. 181, t. 22; *Maxim. in Mél. Biol.* viii. p. 616; *Franch. et Savat. Enum. Pl. Jap.* i. p. 284; *Belg. Hort.* 1871, p. 272, t. 19.

FORMOSA: Tamsui (*Watters*, hb. *Hance*!). Mus. Brit.

Japan.

3. **Pieris ovalifolia,** *D. Don in Edinb. Phil. Journ.* xvii. 1834, p. 159; *G. Don, Gen. Syst.* iii. p. 832; *DC. Prodr.* vii. p. 599; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 460.

Andromeda ovalifolia, *Wall. in Asiat. Res.* xiii. p. 391, cum fig.; *Maxim. in Mél. Biol.* viii. p. 620; *Wight, Ic. Pl. Ind. Or.* t. 1199.

Andromeda elliptica, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 433.

CHEKIANG: Pootoo island near Chusan (*Carles*, 219?); HUPEH: Nanto and mountains to the northward (*A. Henry*!). Mus. Brit.; Herb. Kew.

Var. **lanceolata,** *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 461.

Pieris lanceolata, *D. Don in Edinb. Phil. Journ.* xvii. 1834, p. 159; *DC. Prodr.* vii. p. 599; *Hance in Journ. Bot.* 1878, p. 12.

Andromeda lanceolata, *Wall. in Asiat. Res.* xiii. p. 390 cum fig.

KWANGTUNG: top of the White Cloud mountain (*Sampson*, hb. *Hance*, 1623!), Pakwan, above Canton (*Sampson*, hb. *Hance*, 16440!). Mus. Brit.; Herb. Kew.

Var. **hebecarpa,** *Franchet in litt.*; "panicula lata ramis divaricatis, capsula minore velutina."

CHEKIANG: Meichi (*Poli* ex *Franchet*).

A very common species in North India, extending from Kashmir to the Khasia mountains and Birma, and also inhabiting Japan.

4. **Pieris? Swinhoei,** *Hemsl.*, n. sp.

Frutex undique glaberrimus, ramulis floriferis graciliusculis. *Folia* conferta, breviter petiolata, rigidissime coriacea, subappressa, anguste oblanceolata, 2–3 poll. longa; apiculata, basi cuneata, supra nitida, subtus pallidiora, punctata, venis reticulatis conspicuis, supra medium dentata, margine revoluta. *Flores* ramoso-paniculati, paniculis basi tantum 2–3-ramosis, vel simplici racemosi; paniculæ vel racemi terminales, recti, rigidi, 7–9 p longi, bracteis rigidis fere aculeatis pedicellos æquantibus muni pedicelli juxta flores bibracteolati, supra bracteolas articula post anthesin persistentes, bracteolis subaculeatis opposi patentibus persistentibus. *Calyx* crassus, rigidus, 5-partit segmentis lanceolatis 4–5 lineas longis acutis, corollam ex dentibus? *Stamina* 10, dorso biaristata. *Ovarium* 5-lob 5-loculare.

FOKIEN: Amoy interior (*Swinhoe*!). Herb. Kew.

This is a very distinct plant, remarkable for the rigid natur all the parts including the calyx; but the flowers are in too yo a state to determine the genus, and the fully developed cor may possibly equal, or even exceed, the calyx in length, thoug is not probable that it does.

1. **Enkianthus biflorus,** *Lour. Fl. Cochinch.* p. 277; *DC. Pr* vii. p. 733; *Bretschn. Early Res.* p. 161.

CHINA (ex *Loureiro*).

This is perhaps a reduced state of *E. quinqueflorus*, or it m be *Rhododendron indicum.*

2. **Enkianthus quinqueflorus,** *Lour. Fl. Cochinch.* p. 277; *D Prodr.* vii. p. 732; *Benth. Fl. Hongk.* p. 200; *Bot. Mag.* t. 164 *Bot. Reg.* t. 884; *Rev. Hort.* 3^me^ série, iii. (1849), p. 221, cum i color.

Enkianthus reticulatus, *Lindl. in Bot. Reg.* t. 885.

Melidora pellucida, *Noronha* ex *Salisb. in Trans. Hort. Soc. Lond.* i p. 156.

HONGKONG (*Wilford*! *Hinds*! *Champion*! *Seemann*! and others Mus. Brit.; Herb. Kew.

The only localized specimens of this in the London herbaria are from Hongkong, and Loureiro records it as cultivated at Canton.

[*Enkianthus uniflorus,* Benth. (Hook. Lond. Journ. Bot. i. p. 489), falls, as it was founded on a mixture of two different plants.]

76. ERICACEÆ: RHODODENDREÆ.

1. **Rhododendron anthopogonoides,** *Maxim. in Mél. Biol.* ix 772; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.*, reprint, p. 11.
KANSUH (*Przewalski* ex *Maximowicz*).

2. **Rhododendron atrovirens,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 235.
YUNNAN: near Tchenfongchan, not far from Takouan (*Delavay*!). Herb. Kew.

3. **Rhododendron** (§ **Eurhododendron**) **aucubæfolium,** *Hemsl.*, n. sp.

Frutex 4-pedalis (*Henry*), undique glaberrimus, ramis floriferis crassiusculis, ut videtur viridibus. *Folia* sempervirentia, secus ramos sparsa, coriacea, longe petiolata, patentissima, oblanceolato-oblonga, absque petiolo 6–9 poll. longa, acuminata, basi cuneata, supra, ut videtur, atro-viridia, nitida, subtus pallidiuscula, venis immersis inconspicuis; petiolus crassiusculus, 1–1½ poll. longus. *Cataphylla* et bracteæ carent. *Flores* nivei (*Henry*), laxe fasciculati (fasciculis paucifloris), pedunculis pollicaribus erectis gracillimis; calyx brevissimus, obtusissime 5-dentatus; corolla infundibularis, 1½ poll. diametro, lobis patentibus quam tubum longioribus; stamina 10, longissime exserta, filamentis capillaribus; stylus stamina æquans. *Fructus* non visus.

HUPEH: Patung district (*A. Henry*, 4081!). Herb. Kew.

An exceedingly distinct species with scattered divergent leaves and relatively small flowers on filiform peduncles.

Dr. Henry notes that it is very rare, only one bush having been seen.

4. **Rhododendron** (§ **Eurhododendron**) **Augustinii,** *Hemsl.*, n. sp.

Frutex sempervirens, 4-pedalis (*Henry*), ramosissimus, ramis sæpius tortuosissimis, junioribus hirsutis. *Folia* ad apices ramorum conferta, breviter petiolata, coriacea, lanceolata vel oblongo-lanceolata, 1½–4 poll. longa, calloso-apiculata, basi cuneata vel obtusa, supra citissimo glabrescentia, obscure rugulosa, subtus rufo-lepidota, simul secus costam pilosula; petiolus crassus, primum pilosulus. *Flores* nunc alba nunc rubri vel purpurei (*Henry*), laxe fasciculati (fasciculis sæpissime trifloris), pedunculis gracilibus lepidotis 5–8 lineas longis rectis; calyx fere obsoletu corolla aperte campanulata, plus minusve lepidota; stamina 1 breviter exserta, filamentis infra medium pilosis; ovarium de sissime lepidotum, vertice pilosum. *Fructus* ignotus.

HUPEH: Patung district (*A. Henry*, 1420, 1421, 3736!). Herb Kew.

Allied to *R. Keiskei*, Miq., a Japanese species, and also to *R. rigidum* and *R. rubiginosum*, Franchet, but easily distinguish by the foliar and floral characters given above.

5059 5. **Rhododendron (§ Eurhododendron) auriculatum**, *Hems* n. sp.

Frutex 5-pedalis (*Henry*), ramis floriferis crassis glabris cito glabrescentibus ad extremos tantum foliosis. *Folia* semp virentia, conferta, petiolata, coriacea, oblonga, 4–8 poll. lon usque ad 2 poll. lata, apice rotundata, simul apiculata, b distincte biauriculata, superne glabra, viridia, opaca, subtus pl minusve ferrugineo-tomentosa, demum glabrescentia, tum pallid petiolus 6–12 lineas longus, crassus, grosse glanduloso-hirsut cataphylla anguste lanceolata, longe acuminata. *Flores* 6–8, la corymbosi, longiuscule pedunculati, 2–2½ lineas longi; pediculi crassi, 1–1½ poll. longi, grosse glanduloso-hirsuti; bract alabastrorum floriferorum latæ, subito rigideque acuminatæ; *Calyx* fere obsoletus. *Corolla* anguste campanulata, extus plu minus hirsuta. *Stamina* inclusa? *Capsula* lignosa, sesquipollicaris, oblonga, recta, sæpius 5-valvis, 10-locularis.

HUPEH: Patung district (*A. Henry*, 513, 5029!). Herb. Kew

In the auricled leaves and coarsely glandular hairy petiole this strongly resembles the Indian *R. barbatum*, Wall., though in every other respect it is totally different.

6. **Rhododendron brachyanthum**, *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 234.

YUNNAN: Tsangchan mountain, near Tali, at 3000 metres (*Delavay*!). Herb. Kew.

7. **Rhododendron bullatum**, *Franchet in Bull. Soc. Bot. France*, xxxiv. p. 281.

YUNNAN: Tsangchan mountain, above at Tali, at 2500 metres (*Delavay*!). Herb. Kew.

8. **Rhododendron Bureavi**, *Franchet in Bull. Soc. Bot. France*, xiv. p. 281.

YUNNAN: Yentzehay, near Lankong, at 3200 metres (*Delavay!*). Herb. Kew.

9. **Rhododendron campylogynus**, *Franchet in Bull. Soc. Bot. France*, xxxii. p. 10, et xxxiii. p. 233.

YUNNAN: Tsangchan mountain at 3500 metres (*Delavay!*). Herb. Kew.

10. **Rhododendron capitatum**, *Maxim. in Mél. Biol.* ix. p. 773; *Franchet in Bull. Soc. Bot. France*, xxxii. p. 9; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.*, reprint, p. 11.

KANSUH (*Przewalski* ex *Maximowicz*); YUNNAN: Koulapo, near Hokin (*Delavay* ex *Franchet*).

11. **Rhododendron Championæ**, *Hook. Bot. Mag.* t. 4609; *Benth. in Hook. Kew Journ. Bot.* iv. p. 299, et *Fl. Hongk.* p. 200; *Maxim. Rhod. As. Or.* p. 33.

HONGKONG (*Champion!*). Mus. Brit.; Herb. Kew.

12. **Rhododendron cephalanthum**, *Franchet in Bull. Soc. Bot. France*, xxxii. p. 9, et xxxiii. p. 234.

YUNNAN: Lopinchau, by Lankong, at 3200 metres (*Delavay!*). Herb. Kew.

13. **Rhododendron ciliicalyx**, *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 233.

YUNNAN: mountains of Teechapo, near Mosoyn, at 2400 metres (*Delavay!*). Herb. Kew.

14. **Rhododendron** (§ **Eurhododendron**) **concinnum**, *Hemsl.*, n. sp.

Frutex nanus, dense ramosus, lepidotus nec hirsutus. *Folia* subsparsa (annorum 2–3 persistentia), petiolata, coriacea, ovali-oblonga, cum petiolo 1–1¾ poll. longa, calloso-apiculata, basi obtusissima, primum utrinque dense lepidota, supra demum nuda, subnitida, subtus primum tota flava deinde argentea, lepidibus rufis. *Flores* parvi, fasciculati (fasciculis paucifloris), pedunculis graciliusculis lepidotis 4–5 lineas longis; calyx brevis obscure lobatus; corolla infundibularis, circiter lineas 9 longa, extus tota lepidota, intus infra medium villosula; stamina 10, longiuscule exserta, filamentis infra medium barbatis; ovarium

dense lepidotum, stylo stamina paullo superanti basi lev
pilosulo. *Fructus* deest.

SZECHUEN: summit of Mount Omei (*Faber*!). Herb. Ke

15. **Rhododendron crassum,** *Franchet in Bull. Soc. Bot. Fr*
xxxiv. p. 282.

YUNNAN: in thickets at Houtienpa in the Tsangchan moun
above Tali at 2500 metres (*Delavay* ex *Franchet*).

16. **Rhododendron dauricum,** *Linn. Sp. Pl.* ed. 1, p.
Maxim. Prim. Fl. Amur. p. 189, et *Rhod. As. Or.* p. 43;
mucronulatum; *Hance in Journ. Bot.* 1875, p. 133; *Franc*
Pl. David. p. 107, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 2

Rhododendron mucronulatum, *Turcz. in Bull. Soc. Nat. Mosc.* 18
no. 7, p. 155; *DC. Prodr.* vii. p. 727; *Walp. Ann.* ii. p. 1120.

CHIHLI: higher slopes of Mount Conolly, near Peking (*Bu*
lock!); SHINGKING: hills and cliffs Corean Gate (*Ross*
SHANTUNG: Chefoo (*Hancock*!); COREA: Chemulpo (*Carle*
Mus. Brit.; Herb. Kew.

Dahuria to Mandshuria and Sachalin.

17. **Rhododendron decorum,** *Franchet in Bull. Soc. Bot. Franc*
xxxiii. p. 230.

YUNNAN: Tsangchan at 2200 metres and above Tapintz
(*Delavay*!). Herb. Kew.

This so closely resembles the American *R. catawbiense*, Michx.
even to the deflected leaves, as to suggest specific identity.

18. **Rhododendron Delavayi,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 231.

YUNNAN: Chalk mountains of Houanglipin at 2500 metres (*Delavay*!). Herb. Kew.

19. **Rhododendron ellipticum,** *Maxim. in Mél. Biol.* xi
p. 742.

SOUTHERN CHINA (*Seniawin* ex *Maximowicz*); YAYAMA ARCHIPELAGO: between Luchu and Formosa (*Tashiro* ex *Maximowicz*).

5060 20. **Rhododendron** (§ **Eurhododendron**) **Faberii,** *Hemsl.*, n. sp.

Frutex ramis floriferis crassiusculis, junioribus dense ferrugineo-tomentosis lanatisve. *Folia* sempervirentia, conferta, petiolata, crasse coriacea, ovali-oblonga, cum petiolo 3–4 poll. longa, acuta, basi rotundata vel obscure auriculata, primum utrinque

ferrugineo-tomentosa, supra cito glabrescentia, rugulosa. *Flores* laxe fasciculati (fasciculis paucifloris) $1\frac{1}{2}$ poll. diametro, pedunculis crassiusculis circiter pollicaribus breviter denseque glanduloso-hirsutis ferrugineis apice recurvis; calyx amplus, foliaceus, 6–7 lineas longus, lobis latis rotundatis glanduloso-ciliatis; corolla campanulata, lobis brevibus; stamina styloque inclusa. *Fructus* deest.

SZECHUEN: summit of Omei (*Faber*!). Herb. Kew.

There are few Chinese species having a large foliaceous calyx, and the present is nearest *R. bullatum*, Franchet, which is easily distinguished by its bullate leaves and lepidote corolla. It also approaches the Indian *R. Edgeworthii*, Hook. f.; but in foliage it is so exactly like *R. hæmatodes*, Franchet, as to suggest hybridism.

21. **Rhododendron Farreræ**, *Tate in Sweet's Brit. Fl. Gard.* ser. 2, t. 95; *DC. Prodr.* vii. p. 725; *Hance in Journ. Linn. Soc.* xiii. p. 110; *Planch. in Rev. Hort.* 4^{me} série, iii. p. 64; *Maxim. Rhod. As. Or.* p. 25.

Azalea squamata, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 152, et *Bot. Reg.* 1847, t. 3; *Walp. Ann.* i. p. 481; *Benth. Fl. Hongk.* p. 201.

FOKIEN: Amoy (*Fortune*, 122 pro parte!); KWANGTUNG (*Tate*); HONGKONG (*Champion*! *Urquhart*! *Tate*! *Hance*! *Wilford*! *Wright*!). Mus. Brit.; Herb. Kew.

22. **Rhododendron fastigiatum**, *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 234.

Rhododendron capitatum, var., *Franchet in Bull. Soc. Bot. France*, xxxii. p. 9.

YUNNAN: Tsangchan and at the entrance to the Koulapo mountains (*Delavay*!). Herb. Kew.

23. **Rhododendron Fortunei**, *Lindl. in Gard. Chron.* 1859, p. 868; *Maxim. Rhod. As. Or.* p. 21; *Bot. Mag.* t. 5596.

CHEKIANG: Ningpo (*Fortune*! *Cooper*!); KIANGSI: Kiukiang (*Maries*!); HUPEH: Ichang (*A. Henry*!); SOUTH-WEST CHINA (*Bourne*!). Mus. Brit.; Herb. Kew.

24. **Rhododendron fragrans**, *Maxim. Rhod. As. Or.* p. 16; *Franchet in Bull. Soc. Bot. France*, xxxiv. p. 284 (*forma* parviflora).

Azalea fragrans, *Adams in Mém. Acad. Pétersb.* ii. p. 382, t. 14.

Osmothamnus fragrans, *DC. Prodr.* vii. p. 715.

Osmothamnus pallidus, *DC. Prodr.* vii. p. 715, *Ledeb. Fl. Ross.* ii. p. 918, excl. synon. et locis natalibus nonnullis ex *Maxim.*

YUNNAN: chalk rocks at the foot of Mount Yaninchan, near Lankong, at 2500 metres (*Delavay!*). Herb. Kew.

Eastern Siberia and the Himalayas.

Mr. C. B. Clarke (Hook. f. Fl. Brit. Ind. iii. p. 472) reduces this, *R. micranthum*, Maxim., and other proposed species to *R. Anthopogon*, D. Don, the typical form of which has much larger flowers.

25. **Rhododendron hæmatodes**, *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 232.

YUNNAN: woods, Tsangchan mountain about Tali at 4[illegible] metres (*Delavay!*). Herb. Kew.

26. **Rhododendron** (§ **Eurhododendron**) **Hanceanum**, *Hemsl.*, n. sp.

Frutex lepidotus, ceterequin fere omnino glaber, ramis floriferis crassiusculis rectis, cortice rufescenti. *Folia* ad apices ramorum conferta, breviter petiolata, coriacea, lanceolata, oblanceolata vel obovato-lanceolata, 2–3 poll. longa, acuta, supra glabra, nitida, simul obscure rugulosa, subtus pallidiora, fulva, minute lepidota. *Flores* 7–8 lineas longi, numerosi, densissime cymosi, pedunculis lepidotis 3–4 lineas longis; calyx amplus, lepidotus, persistens, lobis oblongis apice rotundatis quam capsula tertio parte brevioribus; corolla (2 v. 3 delapsas marcidas tantum visas) infundibularis, ad medium lobata, intus parcissime puberula; stamina 10, breviter exserta, filamentis infra medium puberulis. *Capsula* lignosa, dense lepidota, recta, 3–3½ lineas longa, 5-valva, 10-locularis.

SZECHUEN: Mount Omei at 4000 feet (*Faber!*). Herb. Kew.

27. **Rhododendron heliolepis**, *Franchet in Bull. Soc. Bot. France*, xxxiv. p. 283.

YUNNAN: Hokin in woods at 2500 metres, and up to the top above the neck of Koulapo at 3500 metres (*Delavay!*). Herb. Kew.

28. **Rhododendron Henryi**, *Hance in Journ. Bot.* 1881, p. 243, et 1882, p. 281.

KWANGTUNG: North river (*B. C. Henry*, hb. *Hance*, 21638!). Mus. Brit.; Herb. Kew.

Spbl **29. Rhododendron** (§ **Eurhododendron**) **hypoglaucum**, *Hemsl.*, **n.** sp.

Frutex fere omnino glaber, ramis floriferis crassiusculis cortice albescenti. *Folia* sempervirentia, subsparsa, petiolata, rigidissime coriacea, ovali-oblonga, cum petiolo 2½–4 poll. longa, obtusiuscula, supra obscure rugulosa, costa impressa, subtus glauca, costa elevata, venis immersis inconspicuis. *Flores* laxe fasciculati (fasciculis paucifloris), 1½ poll. diametro, pedunculis graciliusculis circiter pollicaribus minute glanduloso-puberulis apice recurvis; calyx minimus, obtusissime 5-dentatus; corolla aperte campanulata, glabra, lobis latis rotundatis; stamina 12 (an semper?), vix exserta, filamentis basin versus parce puberulis; ovarium hirsutum, stylo glabro stamina paullo superanti. *Fructus* non visus.

HUPEH: Patung district (*A. Henry*, 723!). Herb. Kew.

In foliage this is almost exactly like *R. neriiflorum*, Franchet, but that has a large membranous calyx and a narrower corolla of an intense red, even in the dried state. The colour of *R. hypoglaucum* is unknown.

30. Rhododendron indicum, *Sweet, Brit. Fl. Gard.* ser. 2, t. 128; *DC. Prodr.* vii. p. 726; *Maxim. Rhod. As. Or.* p. 37 (*varietates α.* Kæmpferi, *β.* Simsii, *γ.* macranthum, *δ.* obtusum, et *ε.* amœnum); *Franchet, Pl. David.* p. 197; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 29; *Kurz in Journ. Bot.* 1873, p. 193; *Franch. et Savat. Enum. Pl. Jap.* i. p. 291; *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 235.

Azalea indica, *Linn. Sp. Pl.* ed. 1, p. 150; *Benth. Fl. Hongk.* p. 201; *Bot. Mag.* tt. 1480 et 2667; *Bot. Reg.* tt. 811, 1700, et 1716.

Rhododendron Breynii, *Planch. in Rev. Hort.* 4^me^ série, iii. (1854), p. 46.

Rhododendron Kæmpferi, *Planch. loc. cit.* p. 47; *Flore des Serres,* ix. (1853–4), p. 77.

Rhododendron Sieboldii, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* i. p. 33.

Rhododendron Simsii, *Planch. in Rev. Hort.* 4^me^ série, iii. (1854), p. 47 (*Bot. Mag.* t. 1480).

Rhododendron lateritium, *Planch. loc. cit.* p. 63, et *Flore des Serres,* ix. (1853–4), p. 80.

Azalea indica lateritia, *Lindl. Bot. Reg.* t. 1700.

Azalea indica variegata, *Lindl. Bot. Reg.* t. 1716.

Azalea macrantha, *Bunge, Enum. Pl. Chin. Bor.* p. 41.

Rhododendron macranthum, *Sweet, Brit. Fl. Gard.* ser. 2, t. 261.

Azalea Danielsiana, *Paxt. Mag. Bot.* i. p. 129, cum icone.

Rhododendron Danielsianum, *Planch. in Flore des Serres,* ix. (1853–4), p. 79.

Azalea ramentacea, *Lindl. in Journ. Hort. Soc. Lond.* iv. p. 291, cum figura; *Walp. Ann.* ii. p. 1117; *Benth. in Hook. Kew Journ. Bot.* iv. p. 299.

Rhododendron ramentaceum, *Planch. in Rev. Hort.* 4me série, iii. (1854), p. 65, et *in Flore des Serres,* ix. (1853–4), p. 81.

Rhododendron Calleryi, *Planch. in Flore des Serres,* ix. (1853–4), p. 81 (*Sweet, Brit. Fl. Gard.* ser. 2, t. 128).

Rhododendron decumbens, *D. Don in G. Don, Gen. Syst.* iii. p. 846.

Azalea decumbens, *DC. Prodr.* vii. p. 718.

Rhododendron obtusum, *Planch. in Rev. Hort.* 4me série, iii. p. 64.

Azalea obtusa, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 152, et *in Bot. Reg.* 1846, t. 37; *Walp. Rep.* vi. p. 420.

Rhododendron Thunbergii, *Planch. in Flore des Serres,* ix. (1853–4), p. 78.

Rhododendron amœnum, *Planch. loc. cit.* p. 80.

Azalea amœna, *Lindl. in Lindl. & Paxt. Fl. Gard.* iii. t. 89; *Flore des Serres,* tt. 885–8; *Bot. Mag.* t. 4728.

Rhododendron Buergeri, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* i. p. 34.

Azalea crispiflora, *Hook. Bot. Mag.* t. 4726.

Rhododendron crispiflorum, *Planch. in Flore des Serres,* ix. p. 83, t. 888, et *in Rev. Hort.* 4me série, iii. (1854), p. 67.

CHINA: without locality (*Fortune,* 152, 153!); CHEKIANG: Taihoo lake (*Carles*!), Ningpo hills, absolutely crimson in places with this shrub (*Hancock*!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Amoy (*Fortune,* 72, 122!); HUPEH: Ichang, Patung, Nanto and mountains to the northward, very common (*A. Henry*!); SZECHUEN: Chungching (*Bourne*!); YUNNAN: Momyen (*Anderson*!), Tsangchan mountain, above Tali, at 2500 metres (*Delavay*!); HONGKONG: abundant on the hills (*Champion*! *Wright*! *Urquhart*! *Wilford*! and others); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Also throughout Japan.

31. **Rhododendron irroratum,** *Franchet in Bull. Soc. Bot. France,* xxxiv. p. 280.

YUNNAN: in woods at Peetsaolo, near Lankong, at 2500 metres (*Delavay*!). Herb. Kew.

32. **Rhododendron lacteum,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 231.

YUNNAN: a tree forming woods on the Koulapo mountains, and at Yentzehay, near Lankong, at 3200 metres (*Delavay*!). Herb. Kew.

33. **Rhododendron ledifolium,** *G. Don, Gen. Syst.* iii. p. 846; *DC. Prodr.* vii. p. 727; *Planch. in Rev. Hort.* 4^me série, iii. p. 48; *Maxim. Rhod. As. Or.* p. 35; *Franch. et Savat. Enum Pl. Jap.* i. p. 291.

Azalea ledifolia, *Hook. Bot. Mag.* t. 2901.

Azalea indica alba, *Lindl. Bot. Reg.* t. 811; *Lodd. Bot. Cab.* t. 1253.

Azalea mucronata, *Blume, Bijdr.* p. 853; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* i. p. 34.

Rhododendron mucronatum, *G. Don, Gen. Syst.* iii. p. 846.

Rhododendron Burmanni, *G. Don, loc. cit.*; *DC. Prodr.* vii. p. 727.

Azalea rosmarinifolia, *Burm. Fl. Ind.* p. 43, t. 3. f. 3; *Blume, Bijdr.* p. 853.

Rhododendron leucanthum, *Blume, Enum. Pl. Chin. Bor.* p. 41.

HUPEH: Ichang in a garden, originally from Szechuen (*A. Henry*!); COREA: Soul mountains (*Carles*!); LUCHU ARCHIPELAGO (ex *Maximowicz*). Herb. Kew.

Cultivated throughout Japan according to Franchet and Savatier, and scarcely wild; yet Maries collected it on Fusiyama and Oldham on the hills near Nagasaki. Maximowicz records no exact localities for it in China, and Carles' specimen, assuming that to be correctly labelled, is the only wild one we have seen.

[*Rhododendron narcissiflorum*, Planchon (Rev. Hort. 4^me série, iii. (1854), p. 67), syn. *Azalea narcissiflora*, Fortune (ex Planchon), said to be allied to *R. ledifolium* and *R. puniceum*; the latter variety of *R. indicum*. It is one of the many garden varieties roduced by Fortune from China.]

34. **Rhododendron Mariæ,** *Hance in Journ. Bot.* 1882, p. 230.

KWANGTUNG: North river (*B. C. Henry*, hb. *Hance*, 22025!). us. Brit.; Herb. Kew.

35. **Rhododendron micranthum,** *Turcz. in Bull. Soc. Nat. sc.* 1837, n. 7, p. 155; *DC. Prodr.* vii. p. 727; *Maxim. Prim. Amur.* p. 474, et *Rhod. As. Or.* p. 18; *Baker et S. Moore in rn. Linn. Soc.* xvii. p. 384; *Franchet, Pl. David.* p. 197.

CHIHLI: mountains near Peking (*Bretschneider*! *Tatarinow*! *atchkoff*! *Bullock*!); SHINGKING: Chienshan (*Ross*!), Talienan, on the very top of the hills only (*Urquhart*!). Mus. Brit.; rb. Kew.

36. **Rhododendron microphyton**, *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 235.

YUNNAN: mountains around Tali (*Delavay*!). Herb. Kew.

37. **Rhododendron neriiflorum,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 230.

YUNNAN: Tsangchan mountain, above Tali, at 2500 metres (*Delavay*!). Herb. Kew

38. **Rhododendron Oldhami,** *Maxim. Rhod. As. Or.* p. 34.

FORMOSA: Tamsui (*Oldham* 212!). Herb. Kew.

39. **Rhododendron oleifolium,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 235.

YUNNAN: Tsangchan mountain, above Tali, at 2200 metres (*Delavay*!). Herb. Kew.

40. **Rhododendron ovatum,** *Planch.* ex *Maxim. Rhod. As. Or.* p. 45, *in Mél. Bot.* vii. p. 338, et *in Bull. Soc. Nat. Mosc.* 1879, p. 29; *S. Moore in Journ. Bot.* 1878, p. 138.

Azalea ovata, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 149; *Fortune, ibid.* ii. p. 126, t. 2; *Hook. Bot. Mag.* t. 5064; *Benth. Fl. Hongk.* p. 201.

Azalea myrtifolia, *Champ. in Bot. Mag.* sub t. 4609.

CHEKIANG: Ningpo (*Everard*!); KIANGSI: Kiukiang? (*Maries*!); FOKIEN: Amoy (*Fortune*, 52!); HUPEH: Ichang (*A. Henry*, 734!); KWANGTUNG: mountain above Ookaisa, 2400 feet (*Tate*!); Hongkong (*Champion*! *Ford*!). Herb. Kew.

41. **Rhododendron parvifolium,** *Adams in Mém. Soc. Nat. Mosc.* ix. p. 237; *Ledeb. Fl. Ross.* ii. p. 921; *Maxim. Rhod. As. Or.* p. 17.

Rhododendron parviflorum, *Ait.*; *F. Schmidt, Fl. Sachal.* p. 158, n. 297.

SZECHUEN: summit of Mount Omei (*Faber*!). Herb. Kew.

Widely spread in Siberia and Kamtschatka, and very closely allied to *R. lapponicum*, Wahlenb.

42. **Rhododendron phœniceum,** *G. Don, Gen. Syst.* iii. p. 846.

Azalea ledifolia β. phœnicea, *Hook. Bot. Mag.* t. 3239.

Azalea punicea, *Sweet in Ann. de Fromont*, 1829, pp. 102 et 104, ex *Planch.*

Rhododendron puniceum, *Planch. in Rev. Hort.* 4me série, iii. 1854, p. 61; *Maxim. Rhod. As. Or.* p. 35, in nota.

Rhododendron calycinum, *Planch. loc. cit.*

Recorded as Chinese, but Maximowicz suggests that it may be of hybrid origin, under cultivation.

43. **Rhododendron** (§ **Eurhododendron**) **pittosporæfolium,** *Hemsl.*, n. sp.

Frutex undique glaberrimus, ramis graciliusculis tortuosis ad extremos tantum foliosis. *Folia* sempervirentia, petiolata, coriacea, lanceolata vel oblongo-lanceolata, interdum oblanceolata, cum petiolo usque ad 4 poll. longa, acute acuminata, basi cuneata, supra lucida, venis sat conspicue grosse reticulatis, subtus pallidiora, opaca, venis etiam conspicuis. *Flores* albi (*Henry*), 1½–2 poll. diametro, laxissime fasciculati (fasciculis 5–8-floris), pedunculis gracillimis rectis circiter pollicaribus; calyx minimus, obtusissime 5-dentatus; corollæ tubus brevis, angustus, cylindricus, lobis duplo longioribus, patentissimis; stamina 10, filamentis capillaribus longissime exsertis infra medium parcissime puberulis; ovarium glabrum, stylo stamina æquanti vel paullo superanti. *Fructus* non visus.

HUPEH: Patung district, on the mountains to the south (*A. Henry*, 4025, 4031!). Herb. Kew.

Evidently a very elegant species, allied to *R. stamineum*, Franchet, differing in the venation of the leaves, in the colour of the flowers, the relative length of the tube and lobes of the corolla, in the direction of the lobes, in the number of the stamens, and in the much greater length of the genitalia.

44. **Rhododendron polycladum,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 234.

YUNNAN: in pastures and on rocks at the neck of Koulapo, Hokin, at 3000 metres (*Delavay* ex *Franchet*).

45. **Rhododendron Przewalskii,** *Maxim. in Mél. Biol.* ix. p. 771; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.*, reprint, p. 11.

KANSUH (*Przewalski* ex *Maximowicz*).

46. **Rhododendron racemosum,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 235.

YUNNAN: Heechan mountain, above Lankong, at 3000 metres, and Tsangchan, above Tali, at 2500 metres (*Delavay*!). Herb. Kew.

47. **Rhododendron rigidum,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 233.

YUNNAN: Peechaho mountain near Mosoyn (*Delavay*!). Herb. Kew.

4. **Rhododendron rubiginosum,** *Franchet in Bull. Soc. Bot. France*, xxxiv. p. 282.

Yunnan: Tsangchan mountain, above Tali, 2500 metres (*Delavay*!). Herb. Kew.

49. **Rhododendron scabrifolium,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 236.

Yunnan: Heechanmen, above Lankong, at 2500 metres (*Delavay*!). Herb. Kew.

50. **Rhododendron Schlippenbachii,** *Maxim. in Mél. Biol.* vii. p. 333, et *Rhod. As. Or.* p. 29, t. 2. figg. 7-13; *Franch. et Savat. Enum. Pl. Jap.* i. p. 289.

Corea: Soul mountains (*Carles*!); Corean Archipelago: Herschel Island (*Oldham*, 510!). Herb. Kew.

Southern Mandshuria on the coast, and possibly also Japan, where it is also cultivated.

51. **Rhododendron Seniavini,** *Maxim. Rhod. As. Or.* p. 33, t. 3. f. 21.

Southern China: without locality (*Seniavin* ex *Maximowicz*).

52. **Rhododendron Simiarum,** *Hance in Journ. Bot.* 1884, p. 22.

Kwangtung: Lofaushan, at about 3200 feet above the level of the sea (*B. C. Henry*, hb. *Hance*, 22205!). Mus. Brit.

53. **Rhododendron sinense,** *Sweet, Brit. Fl. Gard.* t. 290; *Maxim. Rhod. As. Or.* p. 28; *Hance in Journ. Bot.* 1878, p. 109; *Franch. et Savat. Enum. Pl. Jap.* i. p. 289.

Azalea sinensis, *Lodd. Bot. Cab.* t. 885; *Maxim. in Suppl. ad Ind. Sem. Hort. Petrop.* 1869, p. 11.

Azalea mollis, *Blume, Bijdr.* p. 853; *Regel, Gartenfl.* 1867, p. 289, t. 556; *DC. Prodr.* viii. p. 718.

Rhododendron molle, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 131; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* i. p. 33.

Azalea japonica, *A. Gray in Mem. Amer. Acad.* ser. 2, vi. p. 400.

Azalea pontica, *Linn.*, var. sinensis, *Lindl. Bot. Reg.* t. 1253.

Chekiang: Ningpo mountains (*Hancock*! *Everard*!), hills near Meichi (*Carles*!); Kiangsi: Kiukiang (*Shearer*! *Maries*!); Fokien: Amoy (*Fortune*, 26!): Hupeh: Ichang (*A. Henry*!). Mus. Brit.; Herb. Kew.

And alpine regions of Japan.

54. **Rhododendron stamineum,** *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 236.

Yunnan: Tchengfongchan mountains (*Delavay*!). Herb. Kew.

55. **Rhododendron sublanceolatum,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 163; *Maxim. Rhod. As. Or.* p. 35, et *in Engler's Jahrb.* vi. p. 64; *Franch. et Savat. Enum. Pl. Jap.* i. p. 290.

LUCHU ARCHIPELAGO (*Döderlein* ex *Maximowicz*). Herb. Kew.

Franchet and Savatier suggest that it is perhaps always cultivated in Japan, and Maximowicz states that it is probably of Chinese origin. It is cultivated in Japan under the name of Chinese Azalea.

56. **Rhododendron sulfureum,** *Franchet in Bull. Soc. Bot. France,* xxxiv. p. 283.

YUNNAN: in woods around Hokin at 2500 metres and up to the summit of Koulapo at 3500 metres (*Delavay!*). Herb. Kew.

57. **Rhododendron taliense,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 232.

YUNNAN: Tsangchan mountain, above Tali, at 4000 metres (*Delavay!*). Herb. Kew.

58. **Rhododendron Tashiroi,** *Maxim. in Mél. Biol.* xii. p. 489.

LUCHU ARCHIPELAGO (*Döderlein?* ex *Maximowicz*).

Japan.

59. **Rhododendron thymifolium,** *Maxim. in Mél. Biol.* ix. p. 773.

KANSUH (*Przewalski* ex *Maximowicz*).

60. **Rhododendron trichocladum,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 234.

YUNNAN: Tsangchan mountain, above Tali, at 2500 metres (*Delavay!*). Herb. Kew.

61. **Rhododendron vittatum,** *Planch. in Rev. Hort.* 4^{me} série, ii. p. 66, et *Flore des Serres,* ix. p. 82, cum ic. color.; *Maxim. Rhod. As. Or.* p. 49.

Azalea indica vittata, *Flore des Serres,* ix. p. 77, cum ic. color.

CHINA: recorded as one of Fortune's introductions into European gardens.

As Maximowicz suggests, it is almost certainly a variety of *R. indicum.*

62. **Rhododendron** (§ **Eurhododendron**) **Westlandii,** *Hemsl.,* n. sp.

Frutex interdum subarboreus et usque ad 20 ped. altus (*West-*

land), undique glaberrimus, ramis crassiusculis, cortice albido. *Folia* ad apices ramorum conferta, breviter petiolata, rigide coriacea, lanceolato-oblonga, 2–5 poll. longa, vix acuta, basi cuneata, supra costa immersa, subtus pallidiora, costa elevata, venis primariis lateralibus distantibus sat conspicuis; cataphylla numerosa, coriacea, brevia, lata, arcte imbricata. *Flores* lilacini, fragrantes (*Westland*), laxe fasciculati (fasciculis 6–8-floris), pedunculis crassiusculis rectis 5–8 lineas longis; calyx subobsoletus; corolla campanulata, 1½–2 poll. diametro, glabra; stamina 10, haud exserta, filamentis infra medium puberulis; ovarium glabrum, stylo stamina paullo superanti. *Fructus* ignotus.

KWANGTUNG: Lantao island near Hongkong, at an elevation of 2500 feet (*Westland*, 87 !). Herb. Kew.

In foliage and habit this strongly resembles *R. Championæ*, Hook., but the latter has scabrid leaves and strongly bearded peduncles. It is also near *R. Henryi*, Hance.

63. **Rhododendron Weyrichii**, *Maxim. Rhod. As. Or.* p. 26, t. 2. figg. 1–6; *Franch. et Savat. Enum. Pl. Jap.* i. p. 288.

CHEKIANG: Taihoo lake (*Carles*?); KIANGSI: Kiukiang (*Maries*?); HUPEH: Patung district (*A Henry*?). Herb. Kew.

Japan.

There is no authenticated specimen of this species in the London herbaria, and it is a little uncertain whether the Chinese specimens belong to it.

64. **Rhododendron yunnanense**, *Franchet in Bull. Soc. Bot. France*, xxxiii. p. 232.

YUNNAN: at Houanglipin (*Delavay* ex *Franchet*).

65. **Rhododendron** (§ **Azalea**), sp. n. ?; foliis ad apices ramorum confertis deciduis oblongo-lanceolatis 3–4 poll. longis molliter puberulis conspicue venosis, capsulis ovato-oblongis 12–15 lineas longis nudis.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1700 !). Herb. Kew.

Quite distinct, but in the absence of flowers we forbear giving it a name.

76. ERICACEÆ: PYROLEÆ.

1. **Pyrola rotundifolia**, *Linn. Sp. Pl.* ed. 1, p. 396; *DC. Prod.* vii. p. 772; *Maxim. in Mél. Biol.* viii. p. 622; *Clarke in Hook.*

Fl. Brit. Ind. iii. p. 475; *Hance in Journ. Bot.* 1878, p. 109; *Franchet, Pl. David.* p. 197.

Pyrola asarifolia, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 166.

Pyrola japonica, *Sieb. in Black's List Jap. Pl., Bonplandia,* x. p. 93.

Thelaia rotundifolia, *Alef.,* T. asarifolia, *Alef.,* et verosimiliter T. bracteosa, *Alef., in Linnæa,* 1856, p. 54, ex *Maxim.*

CHIHLI: mountains near Peking (*David*, 2257! *Hancock*!); HUPEH: Patung district (*A. Henry*!); COREA: Port Chusan (*Wilford*, 822!). Mus. Brit.; Herb. Kew.

In temperate and cold regions all round the northern hemisphere.

[*Pyrola renifolia*, Maxim., and *P. secunda*, Linn., are recorded by Maximowicz (Mél. Biol. viii. pp. 624, 625) from the borders of Corea, and they probably occur within our limits.]

1. **Moneses grandiflora,** *Salisb. in Gray, Nat. Arr. Brit. Pl.* ii. p. 403; *DC. Prodr.* vii. p. 775; *Maxim. Prim. Fl. Amur.* p. 191; *Franch. et Savat. Enum. Pl. Jap.* i. p. 296; *Hance in Journ. Bot.* 1878, p. 110.

Pyrola uniflora, *Linn. Sp. Pl.* ed. 1, p. 397.

SHANSI: Siaowutaishan (*Hancock*!). Mus. Brit.

Temperate and cold regions all round the northern hemisphere, though hitherto not discovered in the mountains of Northern India.

1. **Chimaphila japonica,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 165; *Maxim. in Mél. Biol.* viii. p. 626; *Franch. et Savat. Enum. Pl. Jap.* i. p. 296; *Franchet, Pl. David.* p. 197.

SHENSI: southern region (*David* ex *Franchet*); COREA: Port Chusan (*Wilford*, 897!). Herb. Kew.

Japan and Mandshuria.

[*Chimaphila umbellata*, Nutt., is found in Europe, Northern Asia, including Japan, and in North America, southward to the mountains of Mexico, and is likely to occur in China.]

ANOMALOUS GENUS.

1. **Clethra canescens,** *Reinw. in Blume, Bijdr.* p. 863; *Miq. Fl. Ind. Bat.* ii. p. 1056.

Clethra barbinervis, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 128; *Franch. et Savat. Enum. Pl. Jap.* i. p. 282.

Clethra lancifolia, *Turcz. in Bull. Soc. Nat. Mosc.* 1863, xxxvi. 2, p. 231.

Clethra Fabri, *Hance in Journ. Bot.* 1883, p. 130.

HUPEH: Patung district, near Nanto and mountains to the northward (*A. Henry*!); KWANGTUNG: Lofaushan (*Faber*! *Ford*!). Mus. Brit.; Herb. Kew.

Japan, Java, Philippines, and Celebes.

2. **Clethra** (§ **Clematoclethra,** *Franch.*), sp. ?

SZECHUEN: Mount Omei, 4000 to 8000 feet (*Faber*!).

This is very near *C. scandens*, Franchet (Pl. David. ii. p. 91, t. 10), from Chinese Tibet, though probably specifically different. It is an anomalous plant as a *Clethra*, having altogether the habit of *Actinidia*, and in many respects Ternstrœmiaceous in structure.

77. MONOTROPEÆ.

1. **Monotropa uniflora,** *Linn. Sp. Pl.* ed. 1, p. 387; *DC. Prodr.* vii. p. 781; *Franch. et Savat. Enum. Pl. Jap.* i. p. 296; *Maxim. in Mél. Biol.* viii. p. 626; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 476; *Hook. Exot. Fl.* t. 85.

HUPEH: Patung district (*A. Henry*!). Herb. Kew.

Mountains of Northern India, Mandshuria, Japan, and North America.

[*Hypopithys lanuginosa*, Nutt., has almost exactly the same distribution as the last and may be expected to occur in China.]

78. DIAPENSIACEÆ.

1. **Schizocodon rotundifolius,** *Maxim. in Mél. Biol.* xii. p. 743.

YAYAMA ARCHIPELAGO: between Luchu and Formosa (*Tashiro* ex *Maximowicz*).

[Several other members of this small Order inhabit Japan and Mandshuria.]

79. PLUMBAGINEÆ.

1. **Statice aurea,** *Linn. Sp. Pl.* ed. 1, p. 276; *DC. Prodr.* xii. p. 641; *Ledeb. Fl. Ross.* iii. p. 458.

KANSUH: beyond the Great Wall (*Piasezki* ex *Maximowicz* in litt.).

Dahuria and Siberia.

2. **Statice bicolor,** *Bunge, Enum. Pl. Chin. Bor.* p. 55 (*varietates* α. laxiflora et β. densiflora); *DC. Prodr.* xii. p. 642; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 236; *Franchet, Pl. David.* p. 198.

Statice Bungeana, *Boiss. in DC. Prodr.* xii. p. 642.

CHIHLI: near Peking (ex *Bunge*); SHINGKING: Talienhwan (*Swinhoe*, hb. *Hance*, 6517! *Birnie*!); SHANTUNG: Chefoo (*Perry*! *Everard*!). Mus. Brit.; Herb. Kew.

Mongolia and Mandshuria.

3. **Statice Franchetii,** *Debeaux, Fl. Tchef.* p. 115, t. 1.

SHANTUNG: Chefoo (ex *Debeaux*).

Mr. Debeaux also records this from Mandshuria, collected by Swinhoe, but the only specimens at Kew and the British Museum collected in that region by Swinhoe we refer without hesitation to *S. bicolor*, Bunge.

4. **Statice japonica,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 679; *DC. Prodr.* xii. p. 642; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 136; *Franch. et Savat. Enum. Pl. Jap.* i. p. 383.

COREAN ARCHIPELAGO: Bate group (*Oldham*, 651!). Herb. Kew.

Japan.

5. **Statice sinensis,** *Girard in Ann. Sc. Nat.* 3^{me} série, ii. p. 329; *DC. Prodr.* xii. p. 642; *Benth. Fl. Hongk.* p. 281; *Franch. in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 244; *Debeaux, Fl. Tchef.* p. 115.

Statice Fortuni, *Lindl. Bot. Reg.* 1845, t. 63.

SHINGKING: Moukden to Yaloo river (*Webster*!); SHANTUNG (*Maingay*!); FOKIEN: Chinchew (*Fortune*, 130!), Amoy (*Wilford*!); KWANGTUNG: without locality (*Tate*!), Pakhoi (*Playfair*!); HONGKONG (*Champion*!); HAINAN (*Swinhoe*! *B. C. Henry*!); COREA: Chemulpo (*Carles*!). Mus. Brit.; Herb. Kew.

6. **Statice Wrightii,** *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 236.

LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

1. **Plumbago rosea,** *Linn. Sp. Pl.* ed. 2, p. 215; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 481; *Bot. Mag.* t. 5363 (var. coccinea).

Plumbago coccinea, *Boiss. in DC. Prodr.* xii. p. 693.

Thela coccinea, *Lour. Fl. Cochinch.* p. 119.

Plumbagidium roseum, *Spach, Hist. Veg. Phan.* x. p. 339.

CHINA: without locality (*Vachell* in herb. Vindob. ex *Boissier*).

Eastern India and other parts of tropical Asia, and also commonly cultivated.

2. **Plumbago zeylanica,** *Linn. Sp. Pl.* ed. 1, p. 151; *Boiss. in DC. Prodr.* xii. p. 692; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 480; *Hance in Journ. Linn. Soc.* xiii. p. 111; *Wight, Illustr. Ind. Pl.* t. 179; *Bretschn. Early Res.* p. 161 (ceylanica).

Thela alba, *Lour. Fl. Cochinch.* p. 119.

CHINA: without locality (*Fortune*!); FORMOSA: Takow (*Playfair*!); KWANGTUNG: Pakhoi (*Playfair*!); HONGKONG (*Hance*!); KWANGSI (*Wenyon*!); HAINAN (*Fagg*!). Mus. Brit.; Herb. Kew.

Generally spread in the tropics of the Old World, though often probably an escape from cultivation.

1. **Ceratostigma plumbaginoides,** *Bunge, Enum. Pl. Chin. Bor.* p. 53.

Valoradia plumbaginoides, *Boiss. in DC. Prodr.* xii. p. 695; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Bot. Mag.* t. 4487.

Plumbago Larpentæ, *Lindl. in Gard. Chron.* 1847, p. 732; *Flore des Serres*, t. 307.

CHIHLI: near Peking (*Bunge*!); KIANGSU: Shanghai (*Fortune*, 33!); CHEKIANG: Chusan (*Cantor*!); YUNNAN: near Lankong (*Delavay*!). Mus. Brit.; Herb. Kew.

80. PRIMULACEÆ.

1. **Primula amethystina,** *Franchet in Bull. Soc. Bot. France*, xxxii. p. 268; *Pax, Monogr. in Engler's Jahrb.* x. p. 213, reprint, p. 139.

YUNNAN: wet meadows of the Tsangchan mountain near the summit, at 4000 metres (*Delavay*!). Herb. Kew.

2. **Primula auriculata,** *Lam. Illustr.* n. 1931, et *Encycl.* v. p. 628; *DC. Prodr.* vii. p. 38; *Franchet in Bull. Soc. Bot. France,*

xxxii. p. 271 (var. polyphylla); *Pax, Monogr. in Engler's Jahrb.* x. p. 191, reprint, p. 119.

YUNNAN: in meadows, Lankong, above Tali, at 2300 metres, and at Mosoyn at 2200 metres (*Delavay*!). Herb. Kew.

Typical *P. auriculata*, Lam., inhabits Asia Minor and Siberia.

3. **Primula bella,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 268; *Pax, Monogr. in Engler's Jahrb.* x. p. 204, reprint, p. 132.

YUNNAN: mountains of Tali and Tsangchan at 3000 to 4000 metres (*Delavay*!). Herb. Kew.

4. **Primula blattariformis,** *Franchet in Gard. Chron.* 3rd series, i. p. 575; *Pax, Monogr. in Engler's Jahrb.* x. p. 167, reprint, p. 95.

YUNNAN: mountains above Tapintze at 2000 metres (*Delavay*!). Herb. Kew.

5. **Primula bracteata,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 266; *Pax, Monogr. in Engler's Jahrb.* x. p. 176, reprint, p. 104.

YUNNAN: mountains above Mosoyn (*Delavay*!). Herb. Kew.

6. **Primula bullata,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 265; *Pax, Monogr. in Engler's Jahrb.* x. p. 176, reprint, p. 104.

YUNNAN: Heechanmen mountains near Lankong (*Delavay*!). Herb. Kew.

7. **Primula calliantha,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 268; *Pax, Monogr. in Engler's Jahrb.* x. p. 213, reprint, p. 141.

YUNNAN: pine woods on Tsangchan mountain, above Tali, at 3500 metres (*Delavay*!). Herb. Kew.

8. **Primula cernua,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 271; *Pax, Monogr. in Engler's Jahrb.* x. p. 193, reprint, p. 121.

YUNNAN: mountain meadow, Heequichao (*Delavay*!). Herb. Kew.

9. **Primula cortusoides,** *Linn. Sp. Pl.* ed. 1, p. 144; *DC. Prodr.* viii. p. 36; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384;

Ledeb. Fl. Ross. iii. p. 8; *Pax, Monogr. in Engler's Jahrb.* x. p. 168, reprint, p. 95; *Bot. Mag.* t. 399.

SHINGKING: various localities (*Ross*! *Webster*! *James*!). Herb. Kew.

Russia in Europe through Siberia to Japan.

10. **Primula Delavayi,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 272; *Pax, Monogr. in Engler's Jahrb.* x. p. 210, reprint, p. 138.

YUNNAN: Tsangchan mountain, in humid places at 4000 metres (*Delavay*!). Herb. Kew.

11. **Primula denticulata,** *Sm. Exot. Bot.* ii. p. 109, t. 114; *Duby in DC. Prodr.* viii. p. 44; *Hook. f. Fl. Brit. Ind.* iii. p. 485; *Franchet in Bull. Soc. Bot. France,* xxxii. p. 271; *Pax, Monogr. in Engler's Jahrb.* x. p. 193, reprint, p. 121; *Bot. Reg.* 1842, t. 47; *Bot. Mag.* t. 3959.

YUNNAN: summit of Heechanmen, near Lankong, and Tsangchan above Tali (*Delavay*!). Herb. Kew.

Mountains of Northern and Eastern India.

12. **Primula dryadifolia,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 270; *Pax, Monogr. in Engler's Jahrb.* x. p. 213, reprint, p. 141.

YUNNAN: mountains of Likiang at 4000 metres (*Delavay*!). Herb. Kew.

13. **Primula Faberi,** *Oliv. in Hook. Ic. Pl.* xviii. t. 1789.

SZECHUEN: summit of Mount Omei (*Faber*!). Herb. Kew.

14. **Primula flava,** *Maxim. in Mél. Biol.* xi. p. 260; *Pax, Monogr. in Engler's Jahrb.* x. p. 213, reprint, p. 141.

KANSUH (*Przewalski* ex *Maximowicz*).

15. **Primula Forbesii,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 270; *Pax, Monogr. in Engler's Jahrb.* x. p. 171, reprint, p. 99.

YUNNAN: Tapintze near Tali in marshy places (*Delavay*!). Herb. Kew.

16. **Primula glacialis,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 270; *Pax, Monogr. in Engler's Jahrb.* p. 213, reprint, p. 141.

YUNNAN: Likiang, in clefts of rocks near the permanent snows (*Delavay* ex *Franchet!*).

17. **Primula incisa,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 69, et *Pl. David.* ii. p. 96, t. 15. f. A; *Pax, in Engler's Jahrb.* x. p. 235.

SZECHUEN: summit of Mount Omei (*Faber!*). Herb. Kew.

Chinese Tibet.

18. **Primula japonica,** *A. Gray in Mem. Amer. Acad.* n. s. vi. p. 400; *Franch. et Savat. Enum. Pl. Jap.* i. p. 299; *Pax, Monogr. in Engler's Jahrb.* x. p. 218, reprint, p. 142; *Bot. Mag.* t. 5916; *Rev. Hort.* 1871, p. 571, cum ic. color.; *Gartenfl.* t. 729.

YUNNAN: in marshes at Tavangmaio (*Delavay!*). Herb. Kew.

Japan.

Var. **angustidens,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 68.

YUNNAN: Outchai, near Tali (*Delavay,* 214 *bis,* ex *Franchet*).

19. **Primula Listeri,** *King in Hook. f. Fl. Brit. Ind.* iii. p. 485; *Pax, Monogr. in Engler's Jahrb.* x. p. 167, reprint, p. 91; *Franchet in litt.*

Primula obconica, varr. β et γ, *Franchet, in Bull. Soc. Bot. France,* xxxiii. p. 66, *ex Franchet in litt.*

YUNNAN: rocks at Tsangchan above Tali and Gorge of Lankienho near Mosoyn, Lankong (*Delavay,* 307, 845!). Herb. Kew.

Mountains of Eastern India.

20. **Primula malacoides,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 64; *Pax, Monogr. in Engler's Jahrb.* x. p. 171; reprint, p. 99.

YUNNAN: cultivated fields at Tali (*Delavay!*). Herb. Kew.

21. **Primula malvacea,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 65; *Pax, Monogr. in Engler's Jahrb.* x. p. 167, reprint, p. 95.

YUNNAN: mountains above Hokin and Tapintze, 1800 metres (*Delavay!*). Herb. Kew.

22. **Primula Maximowiczii,** *Regel, Descr. Pl. Nov. Turkest.* ii. p. 43, et *in Acta Horti Petrop.* iii. p. 139; *Franchet, Pl. David.* p. 199; *Pax, Monogr. in Engler's Jahrb.* x. p. 218, reprint, p. 146.

Primula oreocharis, *Hance in Journ. Bot.* 1879, p. 12.

CHIHLI: mountains near Peking (*Mœllendorff*! *Bretschneider*! *Hancock*!). Mus. Brit.; Herb. Kew.

23. **Primula membranifolia,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 68; *Pax, Monogr. in Engler's Jahrb.* x. p. 219, reprint, p. 147.

YUNNAN: Tsangchan mountain, above Tali (*Delavay*!). Herb. Kew.

24. **Primula nivalis,** *Pall. It.* iii. p. 320; *Duby in DC. Prodr.* viii. p. 39; *Ledeb. Fl. Ross.* iii. p. 10, *excl.* var. pumila, ex *Pax, Monogr. in Engler's Jahrb.* x. p. 207, reprint, p. 135 (var. purpurea).

Primula Stuartii, *Hook. f. Fl. Brit. Ind.* iii. p. 490, *excl.* var. typica *Franchet in Bull. Soc. Bot. France,* xxxii. p. 270, *non Wall.*

Primula purpurea, *Royle, Illustr. Him. Pl.* p. 311, t. 77. f. 2.

YUNNAN: open localities on the summit of Lopinchan, Lankong, at 3500 metres (*Delavay* 751!). Herb. Kew.

A variable species extending from the Caucasus through Central Asia and the mountains of Northern India to Kamtschatka and North-western America.

We have followed Dr. Pax in treating this as a variety of *P. nivalis,* rather than a variety of the yellow-flowered *P. Stuartii.*

25. **Primula nutans,** *Delavay* ex *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 69; *Pax, Monogr. in Engler's Jahrb.* x. p. 193, reprint, p. 121.

YUNNAN: mountains above Tapintze (*Delavay*!). Herb. Kew.

26. **Primula obconica,** *Hance in Journ. Bot.* 1880, p. 234, et 1882, p. 154; *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 66 (excl. varietates rotundifolia et glabrescens); *Pax, Monogr. in Engler's Jahrb.* x. p. 167, reprint, p. 95.

Primula poculiformis, *Hook. f. Bot. Mag.* t. 6582.

HUPEH: Ichang, Patung and immediate neighbourhood (*A. Henry*!); SZECHUEN: Mount Omei at 3000 feet (*Faber*!), banks of the Blue river at Chapato (*Delavay* !). Mus. Brit.; Herb. Kew.

Pax refers Griffith's figure (Ic. Pl. Asiat. t. 485, *sine nomine*) to this, whereas Hooker (Fl. Brit. Ind. iii. p. 485) refers it to the very closely allied *P. filipes*, Watt.

27. **Primula ovalifolia,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 67; *Pax, Monogr. in Engler's Jahrb.* x. p. 176, reprint, p. 104.

Primula tibetica, *Watt in Journ. Linn. Soc.* xx. p. 6, t. 11 A; *Hook. Fl. Brit. Ind.* iii. p. 488, ex *Pax.*

HUPEH: Patung district (*A. Henry,* 1456, 3731 !). Herb. Kew.

Eastern Tibet.

28. **Primula pellucida,** *Franchet in Bull. Soc. Bot. France, séance du* 14 Déc. 1888, ex *Franchet in litt.*

YUNNAN: humid rocks at Tchenfongshan (*Delavay,* 2274, ex *Franchet*).

29. **Primula pinnatifida,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 271; *Pax, Monogr. in Engler's Jahrb.* x. p. 187, reprint, p. 115.

YUNNAN: glacier of Likiang at 3500 to 4000 metres (*Delavay* !). Herb. Kew.

30. **Primula Poissoni,** *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 67; *Pax, Monogr. in Engler's Jahrb.* x. p. 218, reprint, p. 146.

YUNNAN: in marshes between Tali and Tapintze at 3000 metres (*Delavay* !). Herb. Kew.

31. **Primula pulchella,** *Franchet in litt.*

Primula Stuartii, *Franchet in Bull. Soc. Bot. France,* xxxii. p. 270.

YUNNAN: meadows on a calcareous soil on Chetchotze above Tapintze at 2000 metres (*Delavay,* 1015, 1016 !) Herb. Kew.

32. **Primula Pumilio,** *Maxim. in Mél. Biol.* xi. p. 261; *Pax, Monogr. in Engler's Jahrb.* p. 197, reprint, p. 125.

KANSUH (*Przewalski* ex *Maximowicz*).

North India.

Described by Maximowicz as next to *P. farinosa,* Linn. β. *denudata,* Ledeb., and *P. sibirica,* Jacq.

33. **Primula secundiflora,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 267; *Pax, Monogr. in Engler's Jahrb.* x. p. 206, reprint, p. 134.

YUNNAN: Likiang, 3500 to 4000 metres (*Delavay* ex *Franchet*).

34. **Primula septemloba,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 265; *Pax, Monogr. in Engler's Jahrb.* x. p. 169, reprint, p. 97.

SZECHUEN: Mount Omei, dark ravine at 8000 feet (*Faber* !); YUNNAN: woods at Koulapo, the highest point on the road from Tali to Hokin (*Delavay* !). Herb. Kew.

35. **Primula serratifolia,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 267; *Pax, Monogr. in Engler's Jahrb.* x. p. 219, reprint, p. 147.

YUNNAN: meadows on Tsangchan above Tali, at 4000 metres (*Delavay* !). Herb. Kew.

36. **Primula sikkimensis,** *Hook. Bot. Mag.* t. 4597; *Walp. Ann.* v. p. 465; *Hook. f. Fl. Brit. Ind.* iii. p. 491; *Franchet in Bull. Soc. Bot. France,* xxxii. p. 268; *Pax, Monogr. in Engler's Jahrb.* x. p. 207, reprint, p. 135.

YUNNAN: above Yentzehay, Lankong, at 3500 metres (*Delavay* !). Herb. Kew.

In the Sikkim Himalaya at 11,000 to 15,000 feet.

A specimen in the herbarium of the British Museum, from the Ramala mountains, Szechuen, collected by Captain Gill, may be a reduced state of *R. sikkimensis* or an allied new species.

37. **Primula sinensis,** *Sabine* ex *Lindl. Coll. Bot.* t. 7 (1821); *Hooker, Exot. Fl.* t. 105; *Duby in DC. Prodr.* viii. p. 35; *Hance in Journ. Bot.* 1880, p. 262; *Franchet in Bull. Soc. Bot. France,* xxxiii. p. 65; *Bot. Mag.* t. 2564; *Bretschn. Early Res.* p. 161; *Pax, Monogr. in Engler's Jahrb.* x. p. 167, reprint, p. 95.

Primula prænitens, *Ker, Bot. Reg.* (May, 1821) t. 539.

Primula sertulosa, *Kichx.* ex *Duby in DC. Prodr.* viii. p. 36.

Primula mandorina, *Hoffmannsegg in Otto & Dietrich's Allg. Gart. Zeit.* 1835, p. 195.

Primula semperflorens, *Loisel.* ex *Pax.*

HUPEH: Gorge of Ichang (*Delavay* !), ledges of limestone rocks, where there is no soil and practically no moisture (*A. Henry* !), Ichang (*Watters*, hb. *Hance*). Mus. Brit.; Herb. Kew.

The names *sinensis*, Sabine, and *prænitens*, Ker, were published in the same year, and the latter probably earlier in the year than the former, for Ker states that he did not adopt Sabine's unpublished name *sinensis*, because Loureiro (Fl. Cochinch. p. 105) had already published a *Primula sinensis*, which might or might not belong to the genus. Loureiro's plant still remains obscure; but as almost every author and gardener has adopted Sabine's name, it seems better to retain it.

38. **Primula sonchifolia,** *Franchet in Bull. Soc. Bot. France*, xxxii. p. 266; *Pax, Monogr. in Engler's Jahrb.* x. p. 218, reprint, p. 146.

YUNNAN: woods on Tsangchan mountains, at 3500 metres, after the thaw of the snows (*Delavay*!). Herb. Kew.

39. **Primula spicata,** *Franchet in Bull. Soc. Bot. France*, xxxii. p. 269; *Pax, Monogr. in Engler's Jahrb.* x. p. 187, reprint, p. 115.

YUNNAN: Tsangchan mountain, above Tali, at 2500 metres (*Delavay*!). Herb. Kew.

40. **Primula stenocalyx,** *Maxim. in Mél. Biol.* xi. p. 260; *Pax, Monogr. in Engler's Jahrb.* x. p. 198, reprint, p. 126.

KANSUH (*Przewalski* ex *Maximowicz*).

41. **Primula urticifolia,** *Maxim. in Mél. Biol.* xi. p. 259; *Pax, Monogr. in Engler's Jahrb.* x. p. 211, reprint, p. 139.

KANSUH (*Przewalski* ex *Maximowicz*).

42. **Primula vincæflora,** *Franchet in Gard. Chron.* 3rd series, i. pp. 574–5, f. 108; *Pax, Monogr. in Engler's Jahrb.* x. p. 210, reprint, p. 138.

YUNNAN: meadows at Lopinchan at 3200 metres (*Delavay*!). Herb. Kew.

43. **Primula yunnanensis,** *Franchet in Bull. Soc. Bot. France*, xxxii. p. 269; *Pax, Monogr. in Engler's Jahrb.* x. p. 204, reprint, p. 132.

YUNNAN: in clefts of calcareous rocks at the foot of the Likiang glacier (*Delavay* ex *Franchet*).

1. **Androsace Aizoon,** *Duby in DC. Prodr.* viii. p. 50; *Decne. in*

Jacquem. Voy. Bot. p. 141, t. 145; *Hook. f. Fl. Brit. Ind.* iii. p. 497; *Maxim. in Mél. Biol.* xii. p. 748 (var. integra).

SZECHUEN: northern part (*Potanin* ex *Maximowicz*).

Kashmir and Western Tibet at 8000 to 11,000 feet.

2. **Androsace Chamæjasme,** *Host, Synop.* p. 95; *Willd. Sp. Pl.* i. p. 799; *DC. Prodr.* viii. p. 51; *Ledeb. Fl. Ross.* iii. p. 18; *Hook. f. Fl. Brit. Ind.* iii. p. 499; *Lodd. Bot. Cab.* t. 232.

Androsace villosa, *Jacq. Fl. Austr.* t. 352, *non Linn.*

KANSUH: south of the Hoangho (*Piasezki* ex *Maximowicz* in litt.).

Europe, through Siberia and the mountains of Northern India, to Arctic America.

3. **Androsace elongata,** *Linn. Sp. Pl.* ed. 2, p. 1668; *Duby in DC. Prodr.* viii. p. 53; *Ledeb. Fl. Ross.* iii. p. 20; *Maxim. in Mél. Biol.* xii. p. 747; *Jacq. Fl. Austr.* t. 330.

CHINA: Santschuan on the Hoangho (*Potanin* ex *Maximomicz*).

Southern Central Europe to Siberia.

4. **Androsace erecta,** *Maxim. in Mél. Biol.* xi. p. 262, et xii. p. 745.

KANSUH (*Przewalski* ex *Maximowicz*).

5. **Androsace filiformis,** *Retz. Obs.* ii. p. 10; *DC. Prodr.* viii. p. 53; *Ledeb. Fl. Ross.* iii. p. 21; *Maxim. Prim. Fl. Amur.* p. 92; *A. Gray, Synopt. Fl. N. Am.* ii. 1, p. 60; *Reichb. Ic. Germ.* xvii. t. 69; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384; *Maxim. in Mél. Biol.* xii. p. 747.

SHINGKING: Sarhoo (*Ross*!), between Moukden and Tsungcheshien (*James*!). Herb. Kew.

Russia in Europe, Siberia, Mandshuria, and North America.

6. **Androsace Gmelini,** *Gærtn. Fruct.* i. p. 232; *DC. Prodr.* viii. p. 53; *Ledeb. Fl. Ross.* iii. p. 21; *Maxim. in Mél. Biol.* xii. p. 746.

KANSUH (ex *Maximowicz*); SHAOSHIN (*Savatier* ex *Franchet*).

Central and Eastern Siberia.

"Scapes nombreux naissant d'une rosette centrale, 2–3-fois plus longues que les feuilles; pédicelles filiformes très allongées (2–3 cent.) à la maturité; corolla égalant à peine le calice; sépales accrescent-ovales; capsule globuleuse un peu plus courte que le calice."—*Franchet in litt.*

7. **Androsace rotundifolia,** *Hardw. in Asiat. Res.* iv. p. 350; *Hook. f. Fl. Brit. Ind.* iii. p. 496; *Franchet in Bull. Soc. Bot. France,* xxxii. p. 10 (*varietates* dissecta et axillaris); *Maxim. in Mél. Biol.* xii. p. 745.

YUNNAN: Heechanmen mountain above Lankong, and Koulapo, between Tali and Hokin (*Delavay* ex *Franchet*).

Mountains of Northern India and Chinese Tibet.

8. **Androsace saxifragæfolia,** *Bunge, Pl. Chin. Bor.* p. 53; *DC. Prodr.* viii. p. 53; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384; *Hance in Journ. Bot.* 1882, p. 6, et *in Ann. Sc. Nat.* 5^{me} série, v. p. 223; *Franchet, Pl. David.* p. 199: *Debeaux, Fl. Shangh.* p. 49; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 32; *Hook. f. Fl. Brit. Ind.* iii. p. 496; *Maxim. in Mél. Biol.* xii. p. 746.

Androsace patens, *Wright in Mem. Amer. Acad.* ser. 2, vi. p. 401; *Franch. et Savat. Enum. Pl. Jap.* i. p. 300.

CHIHLI: near Peking (*Bunge*! *Bretschneider*! *Bushell*! *David*! *Tatarinow*! *Hancock*!); SHINGKING: Fungshan (*Ross*!), Talienhwan (*Birnie*! *Swinhoe*!); SHANTUNG: Chefoo (*Hancock*!); KIANGSU: Shanghai (*Maingay*!); CHEKIANG: Ningpo (*Everard*!); KIANGSI: Kiukiang (*Maries*!); HUPEH: Ichang (*A. Henry*!); FORMOSA (*Swinhoe*!); SZECHUEN: Chungching (*Bourne*!); COREA (*Perry*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Plains of India from Calcutta to the Punjab, ascending to 4000 feet in the Himalayas, and in Japan and Mandshuria.

The distribution of this species is highly remarkable.

9. **Androsace sempervivoides,** *Jacquem. in DC. Prodr.* viii. p. 50; *Duby in Mém. Soc. Phys. Genève,* x. t. 3. f. 2; *Hook. f. Fl. Brit. Ind.* iii. p. 497; *Maxim. in Mél. Biol.* xii. p. 749 (var. tibetica).

SHANSI: summit of the Yanmynguan mountains (*Potanin* ex *Maximowicz*).

Afghanistan, Kashmir, and Western Tibet.

10. **Androsace strigillosa,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 10, *β*. spinulifera.

Androsace foliosa, *Klatt in Linnæa,* xxxii. p. 293, *non Duby.*

Androsace sarmentosa, *Wall.,* var. grandifolia, *Hook. f. Fl. Brit. Ind.* iii. p. 498.

YUNNAN: Heechanmen mountain above Lakong (*Delavay* ex *Franchet*).

Franchet describes the Sikkim variety of this species under the name *mutica*.

11. **Androsace tapete,** *Maxim. in Mél. Biol.* xii. p. 754.

KANSU and SZECHUEN (*Potanin* ex *Maximowicz*).

12. **Androsace villosa,** *Linn. Sp. Pl.* ed. 1, p. 142; *Duby in DC. Prodr.* viii. p. 50; *Ledeb. Fl. Ross.* iii. p. 17; *Hook. f. Fl. Brit. Ind.* iii. p. 499; *Maxim. in Mél. Biol.* xii. p. 753; *Jacq. Coll.* i. t. 12.

Androsace Jacquemontii, *Duby in DC. Prodr.* viii. p. 50, et *Mém. Prim.* t. 3. f. 1.

SHANSI: Siaowutaisham (*Bretschneider* ex *Maximowicz*).

Alps and Caucasus through Siberia and the mountains of North India to Kamtschatka.

In addition to the foregoing there are specimens in the Kew Herbarium of one or two other species of *Androsace* allied to *A. saxifragæfolia* and *A. rotundifolia*: one from mount Omei at 5000 feet (*Faber*, 327), and the other from the Patung district, Hupeh (*Henry*, 4868); but as they are only in fruit and single specimens, we cannot name them.

1. **Stimpsonia chamædryoides,** *C. Wright in Mem. Amer. Acad.* 2nd series, vi. p. 401; *Miq. Ann. Mus. Bot. Lugd.-Bat.* iii. p. 122; *Hance in Journ. Bot.* 1878, p. 12.

KIANGSI: Kiukiang (*Maries*! *Shearer*!); FOKIEN: Foochow (*Gregory*!); COREA (*Carles*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

1. **Potamosace Filicula,** *Maxim. in Mél. Biol.* xi. p. 263.

KANSUH: Western alpine regions in several localities at 9000 to 11,000 feet (*Przewalski* ex *Maximowicz*).

1. **Cortusa Matthioli,** *Linn. Sp. Pl.* ed. 1, p. 144; *DC. Prodr.* viii. p. 55; *Hook. f. Fl. Brit. Ind.* iii. p. 501; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Franchet, Pl. David.* p. 200; *Bot. Mag.* t. 987.

CHIHLI: Pohuashan (*David*, 2282!), mountains near Peking, 8000 feet (*Hancock*!). Herb. Kew.

Alps of Europe, mountains of North India, and North Asia.

Mr. Hancock's specimens are almost glabrons, with deeply-lobed leaves and few, large flowers; but there are similar ones in the Kew Herbarium fron Sachalin Island.

1. **Lysimachia Alfredi**, *Hance in Journ. Bot.* 1877, p. 356.

FOKIEN: Foochow (*A. Hance*, hb. Hance, 17884!). Mus. Brit.

2. **Lysimachia alpestris**, *Champ. in Hook. Kew Journ. Bot.* iv. p. 299; *Benth. Fl. Hongk.* p. 202; *Walp. Ann.* v. p. 471; *Hance in Journ. Bot.* 1877, p. 357; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 35, t. 20. f. 2.

HONGKONG (*Champion*! *Wright*! *Wilford*! *Tate*!). Mus. Brit.; Herb. Kew.

138 3. **Lysimachia auriculata**, *Hemsl.*, n. sp.

Herba perennis, erecta, 1–3 ped. alta, undique glaberrima, caulibus simplicibus vel ramosis obscure 4-angulatis. *Folia* opposita, sessilia, semiamplexicaulia, patentissima, papyracea, anguste lanceolata, usque ad 5 poll. longa sed sæpius breviora, longissime acuminata vix acuta, basi auriculata, leviter undulata, crebre haud conspicue glanduloso-punctata, subtus pallidiora, venis primariis inconspicuis. *Flores* albi?, 3–4 lineas longi, laxe racemoso-paniculati, ramulis gracilibus; pedicellis quam flores sæpissime breviores, bracteis angustissimis suffultis; calycis segmenta anguste lanceolata vix acuta, bifariam glandulosa; corolla glanduloso-punctata, campanulata calycem duplo superans, lobis oblongis apice rotundatis; stamina inclusa, corollæ lobis adhærentia; ovarium glabrum.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 474, 572, 641, 752, 2892!). Herb. Kew.

Dr. Klatt's description of his *L. heterogenea* agrees in many particulars with the present species; but that is described as having an eglandular corolla with lanceolate acuminate segments. It is possible, however, that he had imperfect materials and that they may prove to be the same.

4. **Lysimachia barystachys**, *Bunge, Enum. Pl. Chin. Bor.* p. 53; *DC. Prodr.* viii. p. 61; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 225, *Journ. Bot.* 1877, p. 357, et 1882, p. 36; *Franchet, Pl.*

David. p. 201, et *in Mém. Soc. Nat. Cherbourg*, xxiv. p. 233; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384; *Regel, Tent. Fl. Ussur.* p. 11, t. 9. figg. 1–3; nec *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 11, t. 1.

Lysimachia brachystachys, *Carr. in Rev. Hort.* 1881, p. 90, cum ic. color.

Chihli: near Peking (*Bunge*! *Williams*! *Tatarinow*! *Bushell*! *Hancock*! *Bretschneider*!); Shingking: Talienhwan (*Birnie*!), Peiling (*Webster*!), Chienshan (*Ross*!); Shantung: Chefoo (*Perry*!); Hupeh: Ichang and immediate neighbourhood (*A. Henry*!). Mus. Brit.; Herb. Kew.

Japan and Mandshuria.

5. **Lysimachia candida**, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 301; *Walp. Ann.* i. p. 494; *Hance, Journ. Bot.* 1877, p. 357; *Debeaux, Fl. Shangh.* p. 49; *Franchet, Pl. David.* p. 200, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 233; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 30; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 12, t. 1, figura dextra.

Lysimachia samolina, *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 224.

Lysimachia obovata, *Ham.*; *Hook. f. Fl. Brit. Ind.* iii. p. 502.

Lysimachia glaucescens, *Wall.* ex *Hook. f. loc. cit.*

Shantung: Chefoo (*Perry*!); Kiangsu: Shanghai (*Carles*!); Chekiang: Ningpo (*Oldham*, 43!); Fokien: Amoy (*Fortune*, 12!); Hupeh: Ichang (*A. Henry*!); Szechuen: Chungking (*Faber*!); Kwangtung: in rice-fields (*Hance*, 10004!); Kwangsi: about 100 miles from Pakhoi (*Playfair*!); Corea: Port Chusan (*Wilford*, 950!). Mus. Brit.; Herb. Kew.

Eastern India, Birma, Java, Japan, and Mandshuria.

782 6. **Lysimachia capillipes**, *Hemsl.*, n. sp.

Herba annua (*L. alternifolia* simillima sed robustior floribus duplo majoribus), undique glaberrima, erecta vel adscendens, caulibus graciliusculis anguste 4-alatis usque ad 2 ped. longis. *Folia* omnia alterna, graciliter petiolata, tenuia, pallida, nitidula, conspicue venosa, ovato-lanceolata, 1–3 poll. longa, acuta, eglandulosa. *Flores* flavi, axillares, solitarii, 7–8 lineas diametro, pedicellis gracillimis quam folia brevioribus vel superioribus longioribus; calycis segmenta ovata, acuminata, quam corolla multo breviora; corolla vere rotata, fere 5-partita, lobis oblongis subobtusis; stamina breviter monadelpha, filamentis brevissimis,

antheris magnis poris apicalibus dehiscentibus; ovarium glabrum, stylo stamina æquanti.

Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 679, 1529, 4176!); Szechuen: on a hill near Chung city (*Faber*, 251!). Herb. Kew.

A distinct species resembling *L. anagalloides*, Sibth. et Sm., which has opposite leaves, and *L. alternifolia*, Wall.

7. **Lysimachia Christinæ**, *Hance in Journ. Bot.* 1873, p. 167, et 1882, p. 36.

Chekiang: Ningpo (*Mrs. Swinhoe*!); Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 333, 489, 1381, 1822, 3138! *Watters*!); Szechuen: Chungking (*Bourne*! *Faber*!); Shensi or Kansuh: Tsunglin range (*Piasezki* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

937 8. **Lysimachia circæoides**, *Hemsl.*, n. sp.

Herba glaberrima, monocarpica?, habitu omnino *Circææ lutetianæ* (sed foliis integerrimis), 1½–3 ped. alta, caule crasso cavo tetragono. *Folia* opposita, in petiolum attenuata, tenuia, fere membranacea, lanceolata, usque ad 4 poll. longa, acuta, leviter crispato-undulata, et juxta marginem glandulosa, subtus pallidiora. *Flores* albi (*Henry*), pro genere minimi, laxissime racemoso-paniculati, pedicellis gracilibus patentissimis, 4–6 lineas longis, bracteis brevioribus angustissimis subtentis; calycis segmenta ovato-oblonga, subobtusa, obscure ciliolata, apicem versus glandulis duabus linearibus aurantiacis instructa; corolla calycem duplo superans, alte 4-lobata, lobis rotundatis basi constrictis minute crispatis vel erosis; stamina breviora usque ad medium loborum corollæ adnata; pistillum glaberrimum, stylo brevi.

Hupeh: Ichang and Nanto and mountains to the northward (*A. Henry*, 1991, 3513!). Herb. Kew.

Similar to the Indian *L. lobelioides*, Wall. (Bot. Reg. 1842, t. 6), but that has alternate leaves and exserted stamens and style and differs in other characters.

9. **Lysimachia clethroides**, *Duby in DC. Prodr.* viii. p. 61; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 225, et *in Journ. Bot.* 1882, p. 291; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384; *S. Moore in Journ. Bot.* 1875, p. 231; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 13, t. 3.

SHINGKING: Chienshan(*Ross*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang, Patung, Nanto and neighbourhood (*A. Henry*!); COREA: Port Chusan (*Wilford*!); COREAN ARCHIPELAGO (*Oldham*, 545!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

981 10. **Lysimachia congestiflora,** *Hemsl.*, n. sp.

Herba perennis, repens, glabrescens, caulibus primum puberulis gracillimis elongatis ad nodos radicantibus. *Folia* opposita, distincte petiolata, crassiuscula, late ovato-cordata, vel interdum fere orbicularia, $\frac{1}{3}$–$\frac{3}{4}$ poll. lata, pilis paucis albis pluricellulatis appressis munita, præsertim juxta marginem glanduloso-punctata, venis sat conspicuis prope marginem inter se anastomosantibus. *Flores* flavi (*Henry*), pauci ad apices ramulorum cum bracteis rotundatis ciliolatis congesti, subsessiles, circiter 7–8 lineas diametro; calycis segmenta anguste lanceolata, 3–4 lineas longa, acuta, pilis perpaucis albis longis conspersa, eglandulosa (an semper?); corolla subrotata, lobis acutis glandulis linearibus percursis; stamina alte monadelpha; ovarium villosissimum, stylo glabro.

HUPEH: Patung district (*A. Henry*, 862, 1822, 4727!); SZECHUEN: Wushan (*Faber*!); YUNNAN (*Anderson*!). Herb. Kew.

This differs conspicuously from *L. japonica*, Thunb., and *L. Christinæ*, Hance, in the flowers being crowded among bracts at the tips of the branchlets.

982 11. **Lysimachia crispidens,** *Hemsl.* (Plate I.)

Herba monocarpica?, undique glabra, 6–9 poll. alta, multicaulis, caulibus graciliusculis adscendentibus multifloris, foliis bracteiformibus munitis. *Folia* crassiuscula, radicalia rosulata, obovato-spathulata, vel interdum fere rotundata, usque ad 3 poll. longa, plus minusve crispato-undulata; caulina alterna, parva, ovata, sessilia, semiamplexicaulia, sursum gradatim minora, omnia bracteiformia. *Flores* mediocres, rosei (*Henry*), racemosi (vel axillares solitarii), graciliter pedicellati, pedicellis quam bracteæ (vel folia) longioribus post anthesin arcuatim recurvis; calycis segmenta ovato-oblonga, vix acuta; corolla anguste campanulata, alte lobata, lobis contortis; stamina brevia, monadelpha. *Capsula* 5-valvis, calycem fere æquans.—*Stimpsonia crispidens*, Hance in Journ. Bot. 1880, p. 234.

HUPEH: Ichang and neighbourhood (*Watters*, hb. *Hance*,

C Eten del.

LYSIMACHIA CRISPIDENS, *Hemsl.*

[illegible]

21012 ! *A. Henry*, 125, 276, 1257, 3368, 3850 !). Mus. Brit.; Herb. Kew.

A description of this plant is given, because it was at first supposed to be undescribed, and because Dr. Hance's description is supplemented by the very complete materials sent by Dr. Henry. In its rosulate leaves it is only approached in the genus by the very different *L. alpestris,* Champ. Hance referred it to *Stimpsonia,* which it resembles in habit, remarking that the genus hardly differs from *Androsace* except in habit; but, as the genera are constituted, and as far as floral structure is concerned, this is better placed in the polymorphous genus *Lysimachia.*

12. **Lysimachia davurica,** *Ledeb. in Mém. Acad. Sc. Pétersb.* v. p. 523, et *Fl. Ross.* iii. p. 27, et *Ic. Pl. Ross.* t. 214; *Duby in DC. Prodr.* viii. p. 63; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 233; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 20, t. 7.

CHIHLI: Peking (ex *Maximowicz*); SHINGKING: Laoyehling and other hills near Moukden (*James*! *Webster*!); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); COREA: Soul (*Carles*!). Herb. Kew.

Dahuria to Mandshuria.

This should perhaps rank as a variety of *L. vulgaris,* Linn.

13. **Lysimachia decurrens,** *G. Forst. Fl. Ins. Austral. Prodr.* p. 12; *Seem. Fl. Vit.* p. 147; *F. Muell. Contrib. Phytogr. New Hebrides,* p. 17.

Lysimachia javanica, *Blume, Bijdr.* p. 736; *Hook. f. Fl. Brit. Ind.* iii. p. 502; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, t. 5.

Lysimachia multiflora, *Wall.*; *Duby in DC. Prodr.* viii. p. 63.

Lysimachia consobrina, *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 224.

Lysimachia acroadenia, *Maxim. in Mél. Biol.* vi. p. 272.

FORMOSA: Tamsui (*Oldham,* 313 !), without locality (*Swinhoe* !); HUPEH: Ichang and immediate neighbourhood, and Nanto and mountains to the northward (*A. Henry* !); KWANGTUNG: Sainam (*Sampson,* hb. *Hance,* 11033). Mus. Brit.; Herb. Kew.

India, Malaya, New Caledonia, New Hebrides, and Japan.

14. **Lysimachia Fœnumgræcum,** *Hance in Journ. Bot.* 1877, p. 355.

KWANGSI: in the higher mountains (*Graves,* hb. *Hance,* 19587 !). Mus. Brit.; Herb. Kew.

Sir Joseph Hooker (Fl. Brit. Ind. iii. p. 504) regards this as the same as the Indian *L. evalvis*, Wall., which it certainly very closely resembles, but the latter wants altogether the penetrating odour of fenugreek of the Chinese plant. It is used medicinally and to scent hair-oil.

15. **Lysimachia Fortunei,** *Maxim. in Mél. Biol.* vi. p. 270; *Hance in Journ. Bot.* 1870, p. 275, 1874, p. 261, et 1877, p. 357; *Franchet, Pl. David.* p. 201; *Engler's Jahrb.* vi. p. 64.

Lysimachia barystachys, *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 11, t. 1, figura sinistra, saltem pro parte.

KIANGSI: Kiukiang (ex *Hance* et *Franchet*); FORMOSA (*Wilford*! *Oldham*!); FOKIEN: Amoy (*Fortune*, 7!); KWANGTUNG (*Sampson*! *Hance*! *Ford*!); LUCHU ARCHIPELAGO (*Döderlein* ex *Engler*). Mus. Brit.; Herb. Kew.

Japan.

In the Kew Herbarium several specimens of this very different species are named *L. barystachys* by Klatt, notwithstanding the fact that there also existed authentic specimens of the latter; and his figure, cited above, has the slender inflorescence and small flowers of *L. Fortunei* and the hairy foliage of *L. barystachys.*

16. **Lysimachia grammica,** *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 225; *Journ. Bot.* 1877, p. 357; *Franchet, Pl. David.* p. 201.

KIANGSU: Chinkiang (*Hay*, hb. *Hance*, 10122!); HUPEH: Patung district (*A. Henry*!). Mus. Brit.; Herb. Kew.

17. **Lysimachia Henryi,** *Hemsl.*, n. sp.

Herba perennis, ad *L. Klattianam* proxime accedens, differt imprimis foliis latioribus crassioribus minus hirsutis et fere constanter oppositis, pedicellis brevioribus, calycis segmentis latioribus, ovario villoso.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 250 in part, 670, 758, 1374, 1624, 1983, 3579!); SZECHUEN (*Faber*!). Herb. Kew.

Although there is not much describable difference between this and *L. Klattiana*, Hance, they are easily distinguished.

18. **Lysimachia heteroganea** (*sic*), *Klatt in Linnæa*, xxxvii. p. 501.

KWANGTUNG: Fukwing (*Krone* ex *Klatt*).

The above name is probably a misprint for *heterogenea.*

19. **Lysimachia inconspicua,** *Miq. in Journ. de Bot. Néerl.* i. p. 110.

Kwangtung: Foyun (*Krone* ex *Miquel*).

There is nothing among the numerous species we have seen answering to the description of this.

20. **Lysimachia japonica,** *Thunb. Fl. Jap.* p. 83; *Ic. Pl. Jap.* t. 16; *DC. Prodr.* viii. p. 67; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 34, t. 19; *Hook. f. Fl. Brit. Ind.* iii. p. 505; *Kurz in Journ. Bot.* 1873, p. 193; *Hance in Journ. Bot.* 1877, p. 357.

Lysimachia ferruginea, *Edgew. in Trans. Linn. Soc.* xx. p. 83; *S. Moore in Journ. Bot.* 1878, p. 138; *Hance in Journ. Bot.* 1880, p. 299; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 35, t. 20.

China: without locality (*Fortune*, 52!); Kiangsu: Shanghai (*Carles*!); Kiangsi: Kiukiang (*Shearer*!); Formosa: Tamsui (*Oldham*, 312!); Hupeh: Ichang (*A. Henry*!); Yunnan: Momyen (*Anderson*!); Luchu Archipelago (*Wright*!). Mus. Brit.; Herb. Kew.

North India from Kashmir to Khasia, and in Japan, and New South Wales, Australia.

The form named *ferruginea*, Edgew., has larger flowers, and at first sight might be taken for a distinct species, especially when seen only in an early flowering condition, like Fortune's 52, Carles, Shanghai, 385, and Ichang, Henry, 482.

21. **Lysimachia Klattiana,** *Hance in Journ. Bot.* 1878, p. 236; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 233; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 30.

Lysimachia cuspidata, *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 36, t. 20, figuræ dextræ, nec *Blume*.

Shantung: Chefoo (*Carmichael*, hb. *Forbes*!); Kiangsu: Shanghai (*Carles*!); Chekiang: Ningpo (*Oldham*! *Cooper*!); Kiangsi: Kiukiang (*Shearer*!); Fokien: Amoy (*Fortune*, 107!); Hupeh: Ichang (*A. Henry*!). Mus. Brit.; Herb. Kew.

22. **Lysimachia lineariloba,** *Hook. et Arn. Bot. Beech. Voy.* p. 268; *DC. Prodr.* viii. p. 61; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 225; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 431.

Lysimachia lubinioides, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 471; *Benth. et Hook. Gen. Pl.* ii. p. 635; *Franch. et Savat. loc. cit.*

Lubinia spathulata, *Vent. Hort. Cels.* t. 96.

Lysimachia spathulata, *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 32, t. 18

Lysimachia mauritiana, *Lam. Encycl.* iii. p. 572.

SHINGKING: Talienhwan (*Swinhoe*, hb. *Hance*!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: island of Kulangsu near Amoy (*Sampson*, hb. *Hance*, 649!); PESCADORES ISLANDS (*Swinhoe*!); FORMOSA: Tamsui (*Oldham*, 314!); COREAN ARCHIPELAGO (*Oldham*, 547!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan, and colonized in the Mascarene Islands.

707 23. **Lysimachia ophelioides,** *Hemsl.*, n. sp.

Herba erecta vel adscendens perennis ?, habitu generis *Opheliæ*, *Gentianacearum*, tota glaberrima, 1–1½ ped. alta, caulibus graciliusculis ramosis, ramulis apicem versus tantum floriferis. *Folia* omnia opposita, sessilia, semiamplexicaulia, papyracea, anguste lanceolata vel superiora fere linearia, 1½–2 poll. longa (ramulorum lateralium minora), subacuta, basi rotundato-auriculata, subtus glauca. *Flores* mediocres, in axillis foliorum superiorum congestorum solitarii, breviter pedunculati, vel in cymas parvas laterales dispositi; calycis segmenta anguste lanceolata, dorso conspicue 1-costata, circiter 3 lineas longa, glabra vel minutissime puberula, costa apice breviter excurrente ita apiculata; corolla subrotata, lobis latis calycem paullo excedentibus; stamina glabra, corollam æquantia, breviter monadelpha; ovarium glabrum.

SZECHUEN: above Changchou (*Faber*!). Herb. Kew.

In habit and general appearance this has a remarkable resemblance to some of the small-flowered, narrow-leaved slender species of *Ophelia* (*Swertia*).

942 24. **Lysimachia paludicola,** *Hemsl.*, n. sp.

Herba perennis ?, erecta, 1–2 ped. alta, stricta, omnino glabra, caulibus vix ramosis, tetragonis vel basi anguste 4-alatis. *Folia* opposita, sessilia, crassiuscula, oblongo-lanceolata vel inferiora spathulata, 1–2 poll. longa, apice rotundata obtusa vel subacuta, radicalia in petiolum attenuata, caulina basi auriculata, semiamplexicaulia, omnia crebre nigro-punctata, venis immersis obscuris. *Flores* albi (*Henry*), mediocres, laxe racemoso-paniculati, paniculis pauciramosis, graciliter pedicellati, pedicellis floribus paullo longioribus bracteis foliiformibus suffultis; calycis segmenta crassiuscula, ovata, subobtusa, glandulis linearibus nigris vel purpureis longitudinaliter striata; corolla duplo longior fere 5-partita, segmentis ovato-oblongis obtusis suberectis; stamina glabra, corollæ lobis breviter adnatis vix exsertis; pistillum glabrum, stylo stamina æquanti.

Hupeh: moist places, Ichang and immediate neighbourhood (*A. Henry*, 3519!). Herb. Kew.

This approaches *L. auriculata*, Hemsl., but that is a much more branched plant with exceedingly long slender pointed leaves standing at right angles to the stem and glaucous beneath. It also has very narrow bracts and relatively narrower calyx-lobes.

25. **Lysimachia paridiformis**, *Franchet in Bull. Soc. Linn. Paris*, 1884, p. 433 (*varietates* stenophylla et elliptica).

Hupeh: Ichang and immediate neighbourhood (*A. Henry*!); Szechuen: Min river (*Faber*!); Kweichau (*Perny* ex *Franchet*); Kwangtung (*Ford*!). Herb. Kew.

The Kwangtung specimen differs in the stem being leafy, instead of only scaly, below the summit; and all that we have seen of this highly remarkable plant are of the broad-leaved variety (*elliptica*, Franchet). In habit it closely approaches the broad-leaved variety of *Trientalis*, and structurally there is very little to separate the genera, which Klatt unites under *Lysimachia*.

975 26. **Lysimachia parvifolia**, *Franchet*, n. sp.

"*Caulis* erectus, gracilis; ramis elongatis flexuosus sub angulo recto patentibus flagelliformibus. *Folia* parvula (10–15 mill. longa), ovata vel ovato-lanceolata, integerrima, punctata, in petiolum brevem attenuata. *Flores* bracteola brevi subulata suffulti, inferiores cum ramulis alternantes, superiores racemosi, haud terminales sed axem foliatum superantes; pedunculi præsertim inferiores elongati (usque 25 mill.), bracteolis 2–4plo longiores; sepala anguste lanceolata, acuta, corolla alba quarta parte breviora; stamina corollam vix æquantia; stylus brevissime exsertus. *Herba* glaberrima."

Chekiang: Ningpo (*Savatier* ex *Franchet*).

"Espèce remarquable par ses petites feuilles presque toutes ovales, et surtout par son inflorescence dont les fleurs inférieures alternent avec des rameaux feuillés. Elle doit être placée dans le voisinage du *L. prolifera*, Klatt, dont elle se distingue bien du reste par ses feuilles brièvement pétiolées, par ses fleurs une fois plus grandes, par son inflorescence et son état complètement glabre."—*Franchet.*

27. **Lysimachia pentapetala**, *Bunge, Enum. Pl. Chin. Bor.* p. 53; *Hance in Journ. Bot.* 1877, p. 357; *Franchet, Pl. David.*

p. 201, et *in Mêm. Soc. Sc. Nat. Cherbourg*, xxiv. p. 233; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 15, t. 6.

Apochoris pentapetala, *Duby in DC. Prodr.* viii. p. 67; *Debeaux, Fl. Tchef.* p. 114.

CHIHLI: near Peking (*Bunge*! *Kirilow*! *Bushell*! *Hancock*! *Cantor*! *Bretschneider*!); SHINGKING: Talienhwan (*Swinhoe*, hb. *Hance*, 6497!), Kaichow to Kinchow (*Ross*!); SHANTUNG: Chefoo (*Fortune*! *Maingay*! *Carmichael*!); KIANGSU: Shanghai (*Maingay*!). Mus. Brit.; Herb. Kew.

9\3 28. **Lysimachia pterantha,** *Hemsl.*, n. sp. (Plate II.)

Herba sublignosa (vel suffrutex), vagans vel procumbens, caulibus elongatis tenuibus, primum ferrugineo-pubescentibus. *Folia* opposita, petiolata, papyracea, lanceolata, 1–3 poll. longa, acuminata, vix acuta, basi rotundata, integra, glabra vel cito glabrescentia, venis subimmersis inconspicuis. *Flores* axillares, solitarii, breviter pedunculati, circiter 9 lineas diametro, pedunculis petiolos duplo superantibus ferrugineo-pubescentibus; calyx 5-partitus, segmenta corolla fere dimidio breviora, angusta, dorso latissime alata, ala obscure ciliolata; corolla campanulato-rotata, vix ultra medium lobata, lobis ovatis obtusiusculis; stamina inæqualia, alte monadelpha, corolla breviora; ovarium glabrum, stylo stamina æquanti.

SZECHUEN: above Fee city (*Faber*!). Herb. Kew.

A very distinct species both in the long rambling half-woody branches and the very conspicuously winged calyx-lobes.

902 29. **Lysimachia rubiginosa,** *Hemsl.*, n. sp.

Herba perennis (?), ferrugineo-pubescens, erecta, 1½–2 ped. alta, caulibus sæpius simplicibus crassiusculis cavis. *Folia* omnia opposita, longe vel longiuscule petiolata, fere membranacea, ovata, absque petiolo usque ad 3 poll. longa, acute acuminata, basi rotundata vel interdum subcuneata, sparse puberula atque ciliolata, floresque lineis glandulosis brevibus rufis creberrime conspersa, venis primariis prope marginem inter se anastomosantibus. *Flores* flavi, circiter 9 lineas diametro, in cymas parvas (sæpius trifloras) axillares bracteatas breviter pedunculatas dispositi, breviter pedicellati; calycis segmenta lineari-oblonga, vix acuta, 4–5 lineas longa, extus pilosula, post anthesin supra ovarium conniventia; corolla campanulato-rotata, lobis oblongo-lanceolatis acutis; stamina alte monadelpha, glabra, corolla breviora; ovarium apice pilosum, stylo glabro.

C. Fitch del. et lith. J. N. Fitch imp.

LYSIMACHIA PTERANTHA, *Hemsl.*

HUPEH: Patung district, by the side of ditches (*A. Henry*, 1823, 2440, 4680, 4945 !). Herb. Kew.

Not closely allied to any species.

30. **Lysimachia Sikokiana,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 121; *Engler's Jahrb.* vi. p. 64.

LUCHU ARCHIPELAGO (*Döderlein* ex *Engler*).

Japan.

1840 31. **Lysimachia simulans,** *Hemsl.*, n. sp.

Species *L. Fœnogræco* simillima, a qua differt habitu erecto, caulibus teretibus (non angulatis), foliis subtus pallidioribus, calyce parvo.

FORMOSA: Kelung (*Ford* !). Herb. Kew.

At first sight this so closely resembles Hance's *L. Fœnumgræcum*, that it might be taken for it, especially in the dried state; but Hance describes his plant as "caule decumbente longe repente fibras radicantes copiosas emittente compresso-tetragono alis 4 angustis marginato .... sepalis anguste lanceolatis exquisite acuminatis 4 lineas longis." The Formosa plant possesses the same odour of fenugreek, unless indeed it has acquired it through lying next to the Kwangsi plant in the herbarium; but there are the distinct differences indicated above, that of the calyx being most striking, for in *L. simulans*, Hemsl., it is only from a line to a line and a half long.

32. **Lysimachia sinica,** *Miq. in Journ. de Bot. Néerl.* i. p. 110.

KWANGTUNG: Fukwing (*Krone* ex *Miquel*).

This is said to resemble the Indian *L. Leschenaultii*, Duby; and it may be here included under some other name.

675 33. **Lysimachia stenosepala,** *Hemsl.*, n. sp.

Herba perennis ?, erecta, 1–2 ped. alta, undique glaberrima, caulibus tenuibus tetragonis nitidis sæpius simplicibus. *Folia* omnia opposita, in petiolum brevem attenuata, tenuia, fere membranacea, lanceolata, usque ad 5 poll. longa, longe acuteque acuminata, crispato-undulata, marginem versus glanduloso-punctata. *Flores* albi (*Henry*), laxe racemosi, graciliter pedicellati, 3–4 lineas longi, pedicellis quam flores paullo longioribus, bracteis angustissimis fere æquilongis suffultis, per anthesin adscendentibus (post anthesin patentissimis); calycis segmenta

angustissima, quam corolla tertia parte breviora (demum rigida, persistentia capsulam longe superantia ?); corolla campanulata, intus granulato-glandulosa, lobis lanceolatis vix acutis; stamina corollam æquantia, filamentis corollæ ad medium adnatis deorsum dilatatis glandulosis, antheris apice glandula rubra insigni notatis; ovarium glabrum, vel apice parcissime hirsutum. (*Capsula* 5-valvis, stylo longissimo coronata ?)

Hupeh: Patung district and Nanto and mountains to the northward (*A. Henry*, 643, 1804, 1819, 4527, 4715 !). Herb. Kew.

In the fruiting specimens (4527) the leaves are not acuminate, and the raceme is shorter and denser; but they are evidently less luxuriant than the others; and there is little doubt that they are of the same species, though to be on the safe side we have put into brackets the characters taken therefrom.

34. **Lysimachia thyrsiflora,** *Linn. Sp. Pl.* ed. 1, p. 147; *Klatt in Abhandl. Naturw. Ver. Hamb.* iv. 4, p. 42, t. 24.

Naumburgia thyrsiflora, *Reichb. Fl. Excurs.* p. 410; *DC. Prodr.* viii. p. 61; *Ledeb. Fl. Ross.* iii. p. 25; *Franch. et Savat. Enum. Pl. Jap.* i. p. 300.

Shingking: Moukden to Yaloo river (*Webster* ! *James* !). Herb. Kew.

Europe to Japan.

35. **Lysimachia vulgaris,** *Linn. Sp. Pl.* ed. 1, p. 146; *DC. Prodr.* viii. p. 65; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 432; *Ledeb. Fl. Ross.* iii. p. 27.

Hupeh: Nanto and mountains to the northward (*A. Henry* !); Corea: Port Chusan (*Wilford* !). Herb. Kew.

Western Europe and North Africa to Mandshuria and Japan, though not hitherto found in North India.

1. **Trientalis europæa,** *Linn. Sp. Pl.* ed. 1, p. 344; *DC. Prodr.* viii. p. 59; *Maxim. Prim. Fl. Amur.* p. 193; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 430; *A. Gray, Syn. Fl. N. Am.* ii. 1, p. 61.

Shingking: Laoyehling and other hills near Moukden (*James* !). Herb. Kew.

Western Europe to Mandshuria and Japan (though not known

from Northern India), and North America, in Canada and the Western Territories.

Klatt (Linnæa, xxxvii. p. 499) unites *Trientalis* with *Lysimachia* on the ground that no real distinctive character is to be found except in the young seedling plants.

1. **Glaux maritima,** *Linn. Sp. Pl.* ed. 1, p. 207; *DC. Prodr.* viii. p. 59; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Hance in Journ. Bot.* 1882, p. 291; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 430; *Franchet, Pl. David.* p. 201; *Hook. f. Fl. Brit. Ind.* iii. p. 505; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.*, reprint, p. 8.

CHIHLI: Jehol (*David* ex *Franchet*); SHANTUNG: Chefoo (*Perry*!); KANSUH (ex *Kanitz*). Herb. Kew.

Western Europe to Japan, and in Eastern and Western North America.

1. **Anagallis arvensis,** *Linn. Sp. Pl.* ed. 1, p. 148; *DC. Prodr.* viii. p. 69; *Hook. f. Fl. Brit. Ind.* iii. p. 506; *Franch. et Savat. Enum. Pl. Jap.* i. p. 303 (variat. floribus carneis purpureis cæruleis albisve).

Anagallis phœnicea, *Thunb. Fl. Jap.* p. 88.

FOKIEN: Foochow (*Carles*!); FORMOSA (*Oldham*!). Mus. Brit.; Herb. Kew.

Europe, North Africa, and temperate Asia, and colonized in nearly all other temperate regions.

The Chinese specimens are all of the blue-flowered variety.

1. **Samolus Valerandi,** *Linn. Sp. Pl.* ed. 1, p. 171; *DC. Prodr.* viii. p. 73; *Hook. f. Fl. Brit. Ind.* iii. p. 506; *A. Gray, Syn. Fl. N. Am.* ii. 1, p. 64.

KWANGTUNG (*Ford*!). Herb. Kew.

Very widely dispersed in both north and south temperate regions.

81. MYRSINEÆ.

✓ 1. **Mæsa Doraena,** *Blume ex Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 467; *Franch. et Savat. Enum. Pl. Jap.* i. p. 304; *Hance in*

Ann. Sc. Nat. 5^me^ série, v. p. 226, *in Journ. Linn. Soc.* xiii. p. 111, et *in Journ. Bot.* 1870, p. 276; *Engler, Bot. Jahrb.* vi. p. 64.

Mæsa coriacea, *Champ. in Hook. Kew Journ. Bot.* iv. p. 300; *Walp. Ann.* v. p. 473; *Benth. Fl. Hongk.* p. 204.

KIANGSI: Kiukiang (*Maries*! *Shearer*!); FOKIEN: Amoy (*Fortune*, 127! *Swinhoe*!); HUPEH: Nanto and mountains to the northward (*A. Henry*!); HONGKONG (*Champion*! *Wright*! *Hinds*! *Hance*! *Wilford*!); LUCHU ARCHIPELAGO (*Döderlein* ex *Engler*). Mus. Brit.; Herb. Kew.

Japan.

Dr. A. Henry's 3547 from Ichang may be a narrow-leaved variety of this; but it is in too young a state to say what the corolla might develop to.

2. **Mæsa sinensis,** *A. DC. in Ann. Sc. Nat.* 2^me^ série, xvi. p. 80; *DC. Prodr.* viii. p. 82; *Benth. Fl. Hongk.* p. 203.

Mæsa indica *et* M. montana, *Benth. Fl. Hongk.* pp. 203 et 204, *an A. DC.?*

CHINA: without locality (*Fortune*, 151!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Amoy (*Swinhoe*!); FORMOSA (*Oldham*, 302, 303, 305!); KWANGTUNG (*Tate*!); HONGKONG (*Champion*! *Hance*! *Wright*! *Wilford*!); HAINAN (*Swinhoe*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Mr. Bentham suggests (Fl. Hongk. p. 204) that his first three species might be varieties of one; and with additional specimens we are unable to retain them. Whether they are varieties of the variable *M. indica*, Wall., cannot be determined without dissecting the flowers of a large number of specimens.

3. **Mæsa**, sp. n.?; foliis oblongo-lanceolatis longissime acuminatis, racemo fructifero simplici elongato.

SZECHUEN: Mount Omei (*Faber*, 665!). Herb. Kew.

This appears different from the Indian species; but the one fragmentary specimen is insufficient for description.

1. **Myrsine africana,** *Linn. Sp. Pl.* ed. 1, p. 196; *A. DC. Prodr.* viii. p. 93; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 511; *Franchet, Pl. David.* p. 202 (var. bifaria); *Lam. Illustr.* t. 122.

Myrsine bifaria, *Wall. in Roxb. Fl. Ind., ed. Carey et Wall.* ii. p. 296.

Myrsine retusa, *Ait. Hort. Kew.* ed. 1, i. p. 271; *Vent. Hort. Cels.* t. 86; *Jacq. Hort. Schœnbr.* iv. t. 124.

Myrsine glabra, *Gærtn.*, et M. scabra, *Gærtn. Fruct.* i. p. 282, t. 59. f. 1.

South Shensi (*David* ex *Franchet*); Hupeh: Ichang, Nanto and mountains to the northward (*A. Henry*!); Szechuen: Chungking (*Bourne*!). Herb. Kew.

North India from Nepal to Afghanistan; very widely spread in Africa, and reaching the Azores.

2. **Myrsine buxifolia,** *Hance in Ann. Sc. Nat.* 4me série, xv. p. 225.

Fokien (*de Grijs*, hb. *Hance*!). Mus. Brit.

3. **Myrsine capitellata,** *Wall. in Roxb. Fl. Ind., ed. Carey et Wall.* ii. p. 295, et *Tent. Fl. Nep.* t. 25; *DC. Prodr.* viii. p. 94; *Benth. Fl. Hongk.* p. 512; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 512; *Bot. Mag.* t. 3222.

Myrsine neriifolia, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 462; *Franch. et Savat. Enum. Pl. Jap.* i. p. 304; *Engler, Bot. Jahrb.* vi. p. 64.

Formosa: Tamsui (*Oldham*, 304!); Hongkong (*Champion*! *Wilford*!); Luchu Archipelago (*Wright*!). Mus. Brit.; Herb. Kew.

Widely spread in India southward to Ceylon, and nearly throughout Malaya. Also in Seychelles, according to Baker (Fl. Maurit. p. 190); though the plant recorded as common there on the mountain-tops has a somewhat different appearance. The material, however, is not complete.

4. **Myrsine Playfairii,** *Hemsl.*, n. sp.

Frutex dense ramosus, undique glaberrimus, ramulis floriferis crassis densissime foliatis. *Folia* crasse coriacea, breviter petiolata, obovata, 1–2 poll. longa, integerrima, margine cartilaginea, apice rotundata, basi cuneata, subtus pallidiora, costa elevata, venis immersis obscuris. *Flores* tetrameri, parvi, densissime fasciculati, pedicellis brevibus carnosis; calycis segmenta subcarnosa, glanduloso-lineata, lata, obtusa.

Kwangtung: Pakhoi (*Playfair*!). Herb. Kew.

A very distinct species; but the specimen bears only young flower-buds.

5. **Myrsine semiserrata,** Wall.; Clarke in Hook. f. Fl. Brit. Ind. iii. p. 511, var.?

Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 3277 A, B, C, and D!). Herb. Kew.

As defined in the 'Flora of British India,' *M. semiserrata*, Wall., is a very variable species, common in Eastern India and Burma.

6. **Myrsine?** specimen fructiferum foliis lanceolatis integris, subtus pallidis.

Szechuen: Mount Omei, small tree at 2000 feet (*Faber*!). Herb. Kew.

2022 1. **Embelia longifolia,** *Hemsl.*

Samara longifolia, *Benth. Fl. Hongk.* p. 205.

Hongkong (*Harland*! *Hance*! *Ford*!). Mus. Brit.; Herb. Kew.

2. **Embelia nervosa,** *A. DC. in Ann. Sc. Nat.* 2me série, xvi. p. 81; *Prodr.* viii. p. 87.

Kwangtung: Pakhoi (*Playfair*!); Hainan (*Hancock*!). Herb. Kew.

There is a specimen in the Kew Herbarium of what we take, from the locality and the description, to be DeCandolle's plant, from which the Pakhoi specimen differs in the leaves being obscurely crenate. In the Hainan specimen this tendency almost entirely disappears; and with regard to this Mr. Maximowicz arrived independently at the conclusion that it was the *E. nervosa*, A. DC.

1999 3. **Embelia? oblongifolia,** *Hemsl.*, n. sp.

Frutex (*Ford*) glaber, ramulis fructiferis gracillimis ferrugineis. *Folia* crebra, breviter petiolata, papyracea, oblonga, 1½–2½ poll. longa, obtusissima, supra medium obscure paucicrenata, subtus pallida, costa subtus valde elevata, venis sat conspicuis; petiolus gracilis, 1–2 lineas longus. *Flores* in racemos breves axillares dispositi. *Fructus* pisiformis, monospermus.

Kwangtung: Lofaushan at 300 feet (*Ford*!). Herb. Kew.

4. **Embelia obovata,** *Hemsl.*

2243 Samara obovata, *Benth. in Hook. Kew Journ. Bot.* iv. p. 301; *Fl. Hongk.* p. 205.

Choripetalum obovatum, *Benth. in Hook. Lond. Journ. Bot.* i. p. 490.

Choripetalum Benthamianum, *Hance in Walp. Ann.* iii. p. 10.

China: without locality (*Reeves*! *Fortune*, 171!); Kwangtung: Pakhoi (*Playfair*!), Canton and Macao (*Gaudichaud*!); Hongkong (*Hinds*! *Hance*! and numerous other collectors); Hainan (*Swinhoe*! *B. C. Henry*!). Mus. Brit.; Herb. Kew.

5. **Embelia Ribes,** *Burm. Fl. Ind.* p. 62, t. 23; *DC. Prodr.* viii. p. 85; *Benth. Fl. Hongk.* p. 204; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 513; *Lam. Illustr.* t. 133.

China: without locality (*Fortune*, 170!); Kwangtung: Habang (*Tate*!), Lofaushan (*Ford*!); Hongkong (*Hinds*! *Wilford*! *Champion*! *Wright*!). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya.

892 1. **Ardisia* affinis,** *Hemsl.*, n. sp.

Frutex humilis, *A. chinensi* similis, caulibus multo gracilioribus, foliis pallidis minoribus tenuioribus marginem versus tantum conspicue glanduloso-punctatis, calycis segmentis latioribus obtusis.

Kwangtung; without special locality (*Ford*, 106!). Herb. Kew.

At first sight this might be taken for a reduced state of *A. chinensis*; but it is easily distinguished by the differences indicated above. The specimens are in fruit.

1893 2. **Ardisia caudata,** *Hemsl.*, n. sp.

Frutex ramosus, undique glaber, ramulis floriferis gracillimis. *Folia* membranacea, breviter petiolata, anguste lanceolata, 2–3½ poll. longa, caudato-acuminata, subacuta, crispulato-undulata, venis primariis lateralibus distantibus inconspicuis. *Flores* in corymbos breves subumbellatos terminales dispositi, pedicellis gracilibus; calycis segmenta ovato-oblonga, subobtusa; petala circiter 5 lineas longa, ovata, caudato-acuminata, nigro-glandulosa.

Szechuen: Mount Omei at 3500 feet (*Faber*!). Herb. Kew.

3. **Ardisia chinensis,** *Benth. Fl. Hongk.* p. 207.

Ardisia japonica, *Benth. in Hook. Kew Journ. Bot.* iv. p. 301, nec *Blume.*

Formosa: Kelung (*Ford*, 51!); Hongkong (*Champion*!). Herb. Kew.

4. **Ardisia crenata,** *Sims, Bot. Mag.* t. 1950 (vix *Roxb. Hort. Beng.* p. 85, et *Fl. Ind. ed. Carey et Wall.* ii. p. 276); *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 524.

Ardisia crispa, *A. DC. in Trans. Linn. Soc.* xvii. p. 124, et *Prodr.* viii. p. 134, excl. *β.* elegans; *Benth. Fl. Hongk.* p. 206; *Miq. in Ann. Mus.*

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* Thunberg's, or Hornstedt's, genus *Bladhia* has several years' priority over Swartz's *Ardisia*; and there has never been any doubt as to their being the same; yet it seems better to retain the latter, as it is now familiar to everybody.

Bot. Lugd.-Bat. ii. p. 262, et iii. p. 190; *Franch. et Savat. Enum. Pl. Jap.* i. p. 304; *Engler, Bot. Jahrb.* vi. p. 64.

Ardisia punctata, *Lindl. Bot. Reg.* t. 827.
Ardisia lentiginosa, *Lindl. Bot. Reg.* t. 533.
Ardisia crenulata, *Lodd. Bot. Cab.* t. 2, non *Vent. Choix*, t. 5.
Bladhia crispa, *Thunb. Fl. Jap.* p. 97.

CHEKIANG: Ningpo (*Cooper* !); FOKIEN: Amoy (*Swinhoe* !); HUPEH: Ichang and Nanto and mountains to the northward (*A. Henry* !); KWANGTUNG: various localities (*Tate* ! *Callery* ! *Ford* !); HONGKONG (*Hinds* ! *Champion* ! *Wilford* ! and others); HAINAN (*B. C. Henry* !); LUCHU ARCHIPELAGO (*Döderlein* ex *Engler*). Mus. Brit.; Herb. Kew.

Eastern India, Malaya, and Japan.

DeCandolle's β. *elegans* (Andrews, Bot. Rep. t. 623, species) is excluded, though it may well be a variety of this common and widely spread species, as the Rev. B. C. Henry describes the Hainan plant as having purple flowers. Mr. Clarke excludes it without providing for it elsewhere.

1910 5. **Ardisia Faberii**, *Hemsl.*, n. sp.

Frutex procumbens vel adscendens, ramis floriferis vix pedalibus simplicibus ferrugineo-hirsutis. *Folia* petiolata, papyracea, ovato-lanceolata, cum petiolo usque ad 4½ poll. longa, acuta, grosse serrata, parce strigillosa, conspicue venosa. *Flores* 2–5 aggregati, subumbellati, umbellis axillaribus pedunculis quam folia multo brevioribus, pedicellis bracteis calycibusque rigide ferrugineo-hirsutis; calycis segmenta lineari-subulata, rigida, 3-4 lineas longa, prominenter 3–4-nervia; corolla . . . . . . *Fructus* ut videtur rubescens, calyce persistente suffultus.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3304 !); SZECHUEN: Mount Omei (*Faber*, 795 !). Herb. Kew.

This is very distinct among the dwarf species, having large coarsely serrated leaves, more or less clothed with long rigid hairs.

1832 6. **Ardisia Fordii**, *Hemsl.*, n. sp.

Frutex humilis, *A. chinensi* similis, differt foliis anguste lanceolatis venis primariis lateralibus creberrimis subintegris, umbellis paucifloris subsessilibus calycis segmentis obtusis, baccis glanduloso-punctatis.

KWANGTUNG: without special locality (*Ford*, 110 !). Herb. Kew.

There are only fruiting specimens of this, which is allied to *A. chinensis* and *A. affinis*.

7. **Ardisia Henryi**, *Hemsl.*, n. sp.

Frutex ramosus, 2–3-pedalis (*Henry*), undique glaber, ramulis gracilibus. *Folia* tenuia, graciliter petiolata, anguste lanceolata, usque ad 7 poll. longa, vix acuta, obscurissime crenulata, subtus pallidiora, venis inconspicuis. *Flores* rubescentes (*Henry*), mediocres, subumbellati, vel dense corymbosi, umbellis vel corymbis in axillis foliorum superiorum longe graciliterque pedunculati; calycis segmenta brevia, oblonga, obtusissima; petala ovata, subobtusa, parce glanduloso-lineata; antheræ subsessiles. *Fructus* mediocris, ruber (*Henry*).

Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 3455, 3972!); Szechuen: Mount Omei at 4500 feet (*Faber*!). Herb. Kew.

This resembles the narrow-leaved varieties of the Indian *A. pedunculosa*, Wall., differing conspicuously in its small calyx-lobes.

8. **Ardisia humilis**, *Vahl, Symb.* iii. p. 40; *DC. Prodr.* viii. p. 129; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 529.

Ardisia solanacea, *Roxb. Pl. Coromand.* i. p. 27, t. 27; *Bot. Mag.* t. 1677.

Ardisia littoralis, *Andrews, Bot. Rep.* t. 630.

Ardisia umbellata, *Roxb. Fl. Ind. ed. Carey et Wall.* ii. p. 273; *Lodd. Bot. Cab.* t. 531.

Kwangtung: Macao (*Callery*! *Gaudichaud*!); Hainan (ex *Vahl*). Herb. Kew.

Throughout India and Malaya.

9. **Ardisia japonica**, *Blume, Bijdr.* p. 690; *DC. Prodr.* viii. p. 135; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 263, et iii. p. 190; *S. Moore in Journ. Bot.* 1875, p. 231; *Franch. et Savat. Enum. Pl. Jap.* i. p. 305.

Bladhia japonica, *Thunb. Nov. Pl. Gen.* i. p. 6 cum figura, et *Fl. Jap.* p. 95, t. 18; *Gærtn. Fruct.* iii. p. 159, t. 211.

Bladhia glabra, *Thunb. in Trans. Linn. Soc.* ii. p. 331.

Kiangsi: Kiukiang (*Shearer*! *Faber*!); Chekiang: Ningpo mountains (*Faber*!), Taihoo Lake (*Carles*!); Hupeh: Ichang and immediate neighbourhood (*A. Henry*!); Szechuen: Mount

Omei 3000 to 4000 feet (*Faber* !); COREAN ARCHIPELAGO (*Wilford*, 679 !). Mus. Brit.; Herb. Kew.

Japan.

10. **Ardisia mamillata**, *Hance in Journ. Bot.* 1884, p. 290; *Gard. Chron.* 3rd series, ii. 1888, pp. 809, 810, fig. 154.

KWANGTUNG: Lofaushan (*Ford* !). Mus. Brit.; Herb. Kew.

11. **Ardisia pentagona**, *A. DC. in Trans. Linn. Soc.* xvii. p. 124 et *Prodr.* viii. p. 135.

Ardisia pauciflora, *Benth. Fl. Hongk.* p. 206, vix *Heyne*.

Ardisia quinquegona, *Blume, Bijdr.* p. 689.

FORMOSA (*Oldham*, 300 !); KWANGTUNG: Lofaushan (*Ford* !); HONGKONG (*Wright* ! *Champion* ! *Wilford* !); LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit.; Herb. Kew.

From a cultivated specimen of Blume's plant in the Kew Herbarium there is no doubt of its identity with the *Ardisia pauciflora* of the 'Flora Hongkongensis,' which, on the other hand, though strongly resembling, is probably different from the *A. pauciflora*, Heyne, which is apparently restricted to the Deccan Peninsula and Ceylon.

12. **Ardisia primulæfolia**, *Gardn. et Champ. in Hook. Kew Journ. Bot.* i. p. 324; *Benth. Fl. Hongk.* p. 207; *Walp. Ann.* iii. p. 10.

KWANGTUNG: Lofaushan at 3000 feet (*Ford* !); HONGKONG (*Champion* ! *Urquhart* ! *Wilford* ! *Wright* !). Mus. Brit.; Herb. Kew.

Most of the Lofaushan specimens are almost hairless and look very different from the Hongkong plant, but there is one intermediate in character.

13. **Ardisia pusilla**, *A. DC. in Trans. Linn. Soc.* xvii. p. 126, et *Prodr.* viii. p. 137; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 263; *Hance in Journ. Bot.* 1883, p. 322.

Bladhia villosa, *Thunb. Fl. Jap.* p. 96, t. 19.

KWANGTUNG: near Lungmun, 100 miles eastward of Canton (*B. C. Henry*, hb. *Hance* !). Mus. Brit.

Japan.

14. **Ardisia rigida**, *Kurz in Journ. As. Soc. Beng.* 1873, part 2,

p. 87, et *For. Fl. Burma*, ii. p. 107; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 519.

HAINAN (*B. C. Henry*!). Herb. Kew.

Tenasserim.

15. **Ardisia Sieboldii**, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 190.

Ardisia formosana, *Rolfe in Journ. Bot.* 1882, p. 358.

FORMOSA: Tamsui (*Oldham*, 301! *Watters*, 42!), Harbour Island, Kelung (*Ford*!). Mus. Brit.; Herb. Kew.

Japan and the Bonin Islands.

16. **Ardisia triflora**, *Hemsl.*, n. sp.

Frutex humilis *A. chinensi* affinis, differt foliis pallidis tenuioribus integris, umbellis sæpius trifloris, pedunculis pedicellisque gracillimis, calyce minuto.

KWANGTUNG: without locality (*Ford*, 107!). Herb. Kew.

This, *A. chinensis*, *A. Fordii*, and *A affinis* are all closely allied and quite similar in habit. The flowers are unknown except of the first.

17. **Ardisia**, sp. n.?; foliis coriaceis ovato-oblongis.

KWANGTUNG: Lofaushan (*Ford*, 92!). Herb. Kew.

This is different from all the other Chinese species and we have not matched it among the other Asiatic species, but the specimen is insufficient for description.

18. **Ardisia**, sp. n.?; *A. Sieboldii* simillima, sed foliis conspicue venosis.

HAINAN (*B. C. Henry*!). Herb. Kew.

The specimen of this again is hardly sufficient for description in so large a genus.

1. **Ægiceras majus**, *Gærtn. Fruct.* i. p. 216, t. 46. f. 1; *DC. Prodr.* viii. p. 142; *Benth. Fl. Hongk.* p. 208; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 533; *A.DC. in Ann. Sc. Nat.* 2^{me} série, xvi. t. 9; *Wright, Illustr. Ind. Bot.* t. 146.

Ægiceras fragrans, *Konig in Konig et Sims, Ann. Bot.* i. p. 129, t. 3; *Benth. in Hook. Kew Journ. Bot.* iv. p. 302.

HONGKONG (*Champion*!); HAINAN (*Swinhoe*! *Fagg*!). Mus. Brit.; Herb. Kew.

Common on muddy shores of tropical Asia and Australia.

82. SAPOTACEÆ.

1. **Chrysophyllum Roxburghii,** *G. Don, Gen. Syst.* iv. p. 33; *A. DC. Prodr.* viii. p. 162; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 535; *Bedd. Fl. Sylv.* t. 236.

Chrysophyllum pentagonum, *Hance in Journ. Bot.* 1882, p. 78.

Hongkong: Happy Valley (*Ford*! *Hance*, 21613!). Mus. Brit.; Herb. Kew.

Eastern India and Malaya.

1. **Sarcosperma laurina,** *Hook. f. in Benth. et Hook. f. Gen. Pl.* ii. p. 655.

Reptonia laurina, *Benth. Fl. Hongk.* p. 208.

Chekiang: Ningpo mountains (*Faber*!); Kwangtung: Tingushan, West river (*Ford*!); Hongkong (*Harland*! *Ford*!). Herb. Kew.

1461 2. **Sarcosperma? pedunculata,** *Hemsl.*, n. sp.

Frutex 15-pedalis (*Ford*), novellis ferrugineis cito glabrescentibus. *Folia* coriacea, longiuscule petiolata, lanceolata, cum petiolo usque ad 4½ poll. longa, utrinque attenuata, glaberrima, supra nitida, venis primariis lateralibus subtus sat conspicuis. *Flores* . . . . baccæ ad apicem pedunculi communis pollicaris 2–4-aggregatæ, pedicellis brevibus crassiusculis. *Fructus* immaturus tantum adest parvus, 1-spermus; semen adscendens, exalbuminosum, ? embryo amplo plano.

Kwangtung: without locality (*Ford*, 246!). Herb. Kew.

The pedunculate clusters of flowers sufficiently characterize this species, the genus of which must remain doubtful until we obtain flowers.

1. **Sideroxylon ferrugineum,** *Hook. et Arn. Bot. Beech. Voy.* p. 266, t. 55; *A. DC. Prodr.* viii. p. 178; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 537; *Maxim. in Engler, Bot. Jahrb.* vi. p. 65.

Sideroxylon attenuatum, *A.DC. Prodr.* viii. p. 178; *Wight, Ic. Pl. Ind. Or.* t. 1590.

Formosa: Harbour Island, Kelung (*Ford*!); Luchu Archipelago (*Tashiro* ex *Maximowicz*). Herb. Kew.

Malay peninsula and archipelago to the Philippines.

2. **Sideroxylon Wightianum,** *Hook. et Arn. Bot. Beech. Voy.* p. 196, t. 41; *DC. Prodr.* viii. p. 178; *Benth. in Hook. Kew*

Journ. Bot. iv. p. 302, et *Fl. Hongk.* p. 209; *Seem. Bot. Voy. 'Herald,'* p. 397.

CHINA: without locality (*Millett!*); KWANGTUNG: Macao (*Nelson!*); HONGKONG (*Hinds! Champion! Seemann! Wilford!* and others). Mus. Brit.; Herb. Kew.

83. EBENACEÆ.

527 1. **Diospyros** (§ **Gunisanthus?**) **armata,** *Hemsl.*, n. sp.

Arbor 20-pedalis, spinosa (*A. Henry*), dense ramosa, ramulis fructiferis brevibus curvatis paucispinosis rigidis. *Folia* conferta, persistentia, breviter petiolata, coriacea, ovali-oblonga, 1–2 poll. longa, utrinque obtusa, margine recurva, supra glabra, nitida, reticulato-venosa, subtus pallidiora, primum strigillosa, demum nuda. *Flores* . . . . . *Fructus* solitarius, pedunculatus, pedunculo semipollicari, globosus, flavus, circiter 9 lineas diametro, glaber; semina? ; calyx auctus, rigidus, 4-partitus, segmentis obovatis recurvis 5–6 lineas longis.

HUPEH: Nanto and mountains to the northward (*A. Henry!*). Herb. Kew.

A distinct species, with foliage very much like that of an entire-leaved variety of *Quercus Ilex*.

2. **Diospyros eriantha,** *Champ. in Hook. Kew Journ. Bot.* iv. p. 302; *Walp. Ann.* v. p. 479; *Benth. Fl. Hongk.* p. 210; *Hiern, Monogr. in Trans. Cambr. Phil. Soc.* xii. p. 202, n. 69.

HONGKONG (*Champion! Sampson! Wright!*). Mus. Brit.; Herb. Kew.

Borneo and Sumatra.

3. **Diospyros Kaki,** *Linn. f. Suppl.* p. 439; *DC. Prodr.* viii. p. 229; *Hiern, Monogr. in Trans. Cambr. Phil. Soc.* xii. pp. 227–230, cum figura nigra, n. 102; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 555; *Wight, Ic. Pl. Ind. Or.* t. 415; *Illustr. Hort.* 1871, p. 176, t. 78 (var. costata); *Rev. Hort.* 1887, p. 348, cum ic. col. varr. *Kaki, Aurantium, Bertii, elliptica,* et *Sahuti*; *Franch. et Savat. Enum. Pl. Jap.* i. p. 306.

Diospyros chinensis, *Blume, Cat. Hort. Buitenz.* 1823, p. 110, et *Bijdr.* p. 670.

Diospyros Schitze, *Bunge, Enum. Pl. Chin. Bor.* p. 42; *Decne. in Gard. Chron.* 1870, p. 39.

Embryopteris Kaki, *G. Don, Gen. Syst.* iv. p. 41.

Diospyros Roxburghii, *Carr. in Rev. Hort.* 1872, p. 253, figg. 28 et 29.

Diospyros costata, *Carr. in Rev. Hort.* 1870, pp. 131, 134, fig. 24.

Chihli: Peking, cult.? (*Bretschneider*!); Kiangsi: Kiukiang (*Maries*!); Formosa: Tamsui (*Oldham*, 299!); Hupeh: Ichang, Nanto and neighbourhood (*A. Henry*!); Shensi and Kansuh (ex *Maximowicz in litt.*). Mus. Brit.; Herb. Kew.

Eastern India and Japan.

Dr. Henry has sent this under several numbers, and states that it is the Yu-shih-tzu, oil or varnish persimmon. The fruit is cut into halves and put into water; the oil thus obtained is used for waterproofing the common Chinese umbrellas and hats. He does not mention whether his specimens were taken from wild or cultivated trees.

4. **Diospyros Lotus**, *Linn. Sp. Pl.* ed. 1, p. 1057; *DC. Prodr.* viii. p. 228; *Hiern, Monogr. in Trans. Cambr. Phil. Soc.* xii. p. 223, n. 100; *Hance in Journ. Linn. Soc.* xiii. p. 83; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 234; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 555; *Franch. et Savat. Enum. Pl. Jap.* i. p. 306; *Bretschn. Early Res.* p. 128; *Pall. Fl. Ross.* t. 58 et t. 59.

Diospyros microcarpa, *Sieb. in Ann. Soc. Hort. Pays-Bas*, 1844, p. 28.
Diospyros japonica, *Sieb. et Zucc. in Abh. bayer. Acad.* iv. 3, p. 136.

Chihli: near Peking (*Bunge*! *Bretschneider*!); Shantung (*Maingay*!); Hupeh: Patung, Nanto and mountains to the northward (*A. Henry*!); Kwangtung (*Sampson*!); Luchu Archipelago (*Wright*!). Mus. Brit.; Herb. Kew.

Asia Minor, North-west India, and Japan; also naturalized in the countries bordering the Mediterranean sea.

This appears to be quite wild in China. Bunge records it from the mountains near Peking, and Dr. A. Henry from high hills in the Patung district.

5. **Diospyros Morrisiana**, *Hance in Walp. Ann.* iii. p. 14, et *Journ. Bot.* 1880, p. 299; *Benth. in Hook. Kew Journ. Bot.* iv. p. 302, et *Fl. Hongk.* p. 210; *Hiern, Monogr. in Trans. Cambr. Phil. Soc.* xii. p. 219, n. 94.

Hongkong (*Wright*! *Champion*! *Hance*!). Mus. Brit.; Herb. Kew.

6. **Diospyros Oldhami**, *Maxim. in Mél. Biol.* xii. p. 493.

Formosa: Tamsui (*Oldham*, 36!). Herb. Kew.

448 7. **Diospyros (§ Gunisanthus ?) rhombifolia**, *Hemsl.*, n. sp.

Arbor parva, ramosa (*Faber*), ramulis fructiferis gracillimis curvatis glabris. *Folia*, ut videtur, decidua, brevissime petiolata,

papyracea, rhomboideo-obovata, 1–3 poll. longa, obtusa, basi attenuata, supra glabrescentia, subtus secus costam venasque plus minus pubescentia, reticulato-venosa. *Flores* . . . *Fructus* solitarius, pedunculatus, pedunculo gracili circiter pollicari, sphæroideus, 7–8 lineas diametro, glabrescens, mucronatus; semina?; calyx auctus, 4-partitus, segmentis rigide coriaceis oblongis 8–9 lineas longis obtusiusculis obtusis multinerviis.

CHEKIANG: Ningpo hills (*Faber*!). Herb. Kew.

Specimen communicated by Mr. Ford numbered 259, 1887.

This is nearest *D. sinensis*, Hemsl., which has straighter branchlets, oblong-lanceolate leaves, and broadly ovate calyx-lobes.

576 8. **Diospyros (§ Gunisanthus?) sinensis**, *Hemsl.*, n. sp.

Arbor parva vel frutex, ramulis fructiferis gracillimis rectis minute pubescentibus nigrescentibus. *Folia* decidua?, brevissime petiolata, subcoriacea, oblongo-lanceolata, 1½–3 poll. longa, obtusa, glabrescentia, venis inconspicuis. *Flores* . . . *Fructus* solitarius, graciliter pedunculatus, pedunculo circiter pollicari, sphæroideus vel ovoideus, 8–9 lineas longus, glabrescens; semina?; calyx accrescens, 4-partitus, segmentis coriaceis ovatis circiter 6 lineas longis obtusis venosis.

SZECHUEN: Mount Omei at 4000 feet (*Faber*!). Herb. Kew.

Nearly allied to *D. rhombifolia*, Hemsl., but differing in its dark hue, narrower leaves, and broad calyx-lobes.

9. **Diospyros vaccinioides**, *Lindl. in Hook. Exot. Fl.* t. 139; *Lodd. Bot. Cab.* t. 1549; *Hiern, Monogr. in Trans. Cambr. Phil. Soc.* xii. p. 230, n. 104, partim et excl. hab. Ind. Or.

Rospidios vaccinioides, *A. DC. Prodr.* viii. p. 220; *Benth. Fl. Hongk.* p. 210; *Hance in Ann. Sc. Nat.* 5me série, v. p. 227; *Seem. Bot. Voy. 'Herald,'* p. 397.

HONGKONG (*Champion*! *Wright*! *Millett*! *Hance*! *Seemann*! and others). Mus. Brit.; Herb. Kew.

[Dr. Bretschneider (Early Res. p. 102) states that ebony, *Maba Ebenus*, Spreng. = *M. elliptica*, Forst., seems to be produced in China; and as the tree in question inhabits Cochin China, it may also occur in the south of China Proper, or the Chinese ebony may be the product of a different tree.

Euclea herbacea, Lour. (Fl. Cochinch. p. 639), does not belong to this Order, and is doubtfully referred by Hiern (Trans. Cambr. Phil. Soc. xii. p. 106) to the *Euphorbiaceæ*.]

84. STYRACEÆ.

1. **Symplocos adenopus**, *Hance in Journ. Bot.* 1883, p. 322.

KWANGTUNG: Lofaushan (*Faber*, hb. *Hance*, 22138!). Mus. Brit.

2. **Symplocos congesta**, *Benth. Fl. Hongk.* p. 211.

CHEKIANG: Chusan (*Fortune*, 59!); HONGKONG (*Champion*! *Lamont*!). Mus. Brit.; Herb. Kew.

3. **Symplocos crassifolia**, *Benth. Fl. Hongk.* p. 212.

Symplocos japonica, var. crassifolia, *Benth. in Hook. Kew Journ. Bot.* iv. p. 303.

Lodhra crassifolia, *Miers in Journ. Linn. Soc.* xvii. p. 302.

HONGKONG (*Champion*!). Herb. Kew.

4. **Symplocos cratægoides**, *Ham. in D. Don's Prodr. Fl. Nep.* p. 145; *A. DC. Prodr.* viii. p. 258; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 573.

Lodhra cratægoides, *Decne. in Jacquem. Voy., Bot.* p. 103, t. 110.

Symplocos paniculata, *Wall. Cat.* 4429.

KIANGSU: Shanghai (*Carles*!); CHEKIANG: Ningpo (*Hancock*!); KIANGSI: Kiukiang (*Maries*!); FOKIEN: Amoy (*Fortune*, 49!); FORMOSA: Tamsui (*Oldham*, 298!); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*! *Faber*!); KWANGTUNG (*Tate*! *Ford*!); COREA: Soul (*Carles*!); COREAN ARCHIPELAGO: Long Reach (*Oldham*, 532!), Port Hamilton (*Wilford*!). Mus. Brit.; Herb. Kew.

North India and Japan.

5. **Symplocos decora**, *Hance in Journ. Bot.* 1874, p. 369, et 1876, p. 307.

CHEKIANG: Ningpo (*Everard*!): HONGKONG (*Ford*!). Mus. Brit.; Herb. Kew.

6. **Symplocos ferruginea**, *Roxb. Fl. Ind.* ii. p. 542; *A. DC. Prodr.* viii. p. 257; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 574; *Hance in Journ. Bot.* 1876, p. 307.

Lodhra ferruginea, *Miers in Journ. Linn. Soc.* xvii. p. 299.

KWANGTUNG: southern coast region (*Hance*, 13810!). Mus. Brit.

Eastern India and Malaya.

7. **Symplocos Fordii,** *Hance in Journ. Bot.* 1882, p. 78.

HONGKONG: Victoria Peak and Happy Valley (*Ford*!). Mus. Brit.; Herb. Kew.

8. **Symplocos Henschelii,** *Benth. et Hook. f. Gen. Pl.* ii. p. 669; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 588.

Cordyloblaste Henschelii, *Moritz in Bot. Zeit.* 1848, p. 606.

KWANGTUNG: Lofaushan (*Ford*, 93!). Herb. Kew.

And Mount Ophir, Malacca.

9. **Symplocos japonica,** *A. DC. Prodr.* viii. p. 255; *Franch. et Savat. Enum. Pl. Jap.* i. p. 307; *Engler, Bot. Jahrb.* vi. p. 64.

Symplocos lucida, *Sieb. et Zucc. Fl. Jap.* i. p. 55, t. 24.

Bobua japonica, *Miers in Journ. Linn. Soc.* xvii. p. 306.

Symplocos phyllocalyx, *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 575.

CHEKIANG (*Fortune*!); HUPEH: Patung district (*A. Henry*, 2843, 3730!); SZECHUEN: Mount Omei at 6000 feet (*Faber*!); LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

Japan.

10 **Symplocos lancifolia,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 9, n. 453; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 101; *Franch. et Savat. Enum. Pl. Jap.* i. p. 307; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 577; *Hance in Journ. Bot.* 1870, p. 276.

Symplocos leptostachys, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 10.

Symplocos microcarpa, *Champ. in Hook. Kew Journ. Bot.* iv. p. 303; *Benth. Fl. Hongk.* p. 212.

Bobua lancifolia, *Miers in Journ. Linn. Soc.* xvii. p. 306.

Lodhra microcarpa, *Miers, loc. cit.* p. 302.

KWANGTUNG: Lofaushan (*Ford*, 75!), in a wood below the summit of Mount Pakwan (*Sampson & Hance*, 13513!); HONGKONG (*Wilford*! *Champion*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Eastern India and Japan.

11. **Symplocos myrtacea,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 9; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 103; *Franch. et Savat. Enum. Pl. Jap.* i. p. 309.

Bobua myrtacea, *Miers in Journ. Linn. Soc.* xvii. p. 306.

FORMOSA: Tamsui (*Oldham*, 297!). Mus. Brit.; Herb. Kew.

Japan.

12. **Symplocos neriifolia,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii.

p. 10; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 102; *Franch. et Savat. Enum. Pl. Jap.* i. p. 308; *Hance in Journ. Bot.* 1887, p. 12; *Engler, Bot. Jahrb.* vi. p. 65.

Bobua neriifolia, *Miers in Journ. Linn. Soc.* xvii. p. 306.

Chekiang: Ningpo (*Faber*!); Formosa: Tamsui (*Oldham*, 295!); Kelung (*Ford*!); Kwangtung: Lienchau river (*B. C. Henry*!); Luchu Archipelago (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

13. **Symplocos prunifolia**, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 9; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 101; *Franch. et Savat. Enum. Pl. Jap.* i. p. 308.

Symplocos caudata, *Wall. Cat.* 4113; *A. DC. Prodr.* viii. p. 256; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 577.

Symplocos Swinhoeana, *Hance in Ann. Sc. Nat.* 4^{me} série, xv. p. 226.

Lodbra caudata, *Miers in Journ. Linn. Soc.* xvii. p. 300.

Bobua prunifolia, *Miers, loc. cit.* p. 306.

China: without locality (*Fortune*, 25 & 30!); Kiangsi: Kiukiang (*Maries*! *Faber*!); Fokien (*Swinhoe*!); Hupeh: Ichang (*A. Henry*!); Kwangtung: Lofaushan (*Ford*!). Mus. Brit.; Herb. Kew.

Eastern India and Japan.

Franchet (Pl. David. ii. p. 99) suggests that Fortune's number 30 is the same as his *Symplocos botryantha*, described in the place cited; but if this be so, and it is really specifically distinct from *S. prunifolia*, Sieb. et Zucc., then Hance's name *S. Swinhoeana* must be revived for it.

14. **Symplocos racemosa**, *Roxb. Fl. Ind.* ii. p. 539; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 576, non *A. DC.*

Symplocos Hamiltoniana, *Wall. Cat.* 4420; *A. DC. Prodr.* viii. p. 254.

Symplocos propinqua, *Hance in Journ. Bot.* 1868, p. 329.

Kwangtung: near the monastery north of the town of Shuitung (*Sampson & Hance*, 13796!). Mus. Brit.; Herb. Kew.

Eastern India and Burma.

15. **Symplocos sinica**, *Ker, Bot. Reg.* t. 710; *A. DC. Prodr.* viii. p. 258; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 103; *Franch. et Savat. Enum. Pl. Jap.* i. p. 309, et ii. p. 433; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 234.

Myrtus chinensis, *Lour. Fl. Cochinch.* p. 313; *DC. Prodr.* iii. p. 242, et viii. p. 258.

Palura sinica, *Miers in Journ. Linn. Soc.* xvii. p. 297.

China: without locality (*Parkes*!); Kiangsu: Shanghai (*Carles*!); Kiangsi: Kiukiang (*Shearer*!); Fokien: Amoy (*Hance*, 1443!); Formosa (*Maries*! *Swinhoe*!); Hupeh: Ichang; Kwangtung (*Ford*! *Wenyon*!) Mus. Brit.; Herb. Kew.

Var. ? **vestita**, *Hemsl.*; ramulis foliisque dense hirsutis.

Kwangtung: Lantao Island (*native collector* ex *Ford*!). Herb. Kew.

16. **Symplocos spicata**, *Roxb. Fl. Ind.* ii. p. 541; *A. DC. Prodr.* viii. p. 254; *Benth. Fl. Hongk.* p. 212; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 573; *Wight, Illustr. Ind. Bot.* t. 150.

Lodhra spicata, *Miers in Journ. Linn. Soc.* xvii. p. 298.

China: without locality (*Parkes*!); Formosa (*Oldham*, 296!); Szechuen: Kiating, on the Min river (*Faber*!); Kwangtung: Lofaushan (*Ford*!); Hongkong (*Harland*!). Mus. Brit.; Herb. Kew.

Northern and Eastern India and Japan, and perhaps also Australia.

17. **Symplocos urceolaris**, *Hance in Journ. Bot.* 1876, p. 307.

Kwangtung: West river (*Lamont*, hb. *Hance*, 19309!). Mus. Brit.

18. **Symplocos** sp. n.? ad *S. ramosissimam* proxime accedens.

Szechuen: Mount Omeï at 4000 feet (*Faber*!). Herb. Kew.

162 1. **Halesia? Fortunei**, *Hemsl.*, n. sp.

Arbor?, ramulis floriferis stellato-puberulis cinereis, annotinis glabrescentibus nigrescentibus. *Folia* breviter petiolata, papyracea, late ovalia, usque ad 4 poll. longa, obtusiuscula, obscure serrulata, primum stellato-puberula, deinde glabrescentia, subtus pallidiora, venis primariis lateralibus paucis sat conspicuis. *Flores* ad apices ramulorum hornotinorum fasciculato-corymbosi, circiter 9 lineas diametro, breviter pedicellati; calycis lobi parvi, subacuti; corolla fere 5-partita, tomentosa; stamina 10, alte irre-

gulariter connata, alterna breviora; stylus basi pilosus. *Fructus* ignotus.

Fokien: Amoy (*Fortune*, 27A!); Hainan (*B. C. Henry*?). Herb. Kew.

It is not quite certain that the Hainan specimen is of the same species as Fortune's 27, from which the foregoing description was drawn up, though the outward resemblance is exact. The Rev. B. C. Henry describes it as a tree 40 feet high; flowers white. We have followed the late Mr. Bentham in referring Fortune's plant to this genus. It is the one referred to as Chinese in the 'Genera Plantarum.'

2. **Halesia hispida**, *Benth. et Hook. f. Gen. Plant.* ii. p. 669.

Pterostyrax hispidum, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 8, n. 449; *Walp. Ann.* i. p. 500; *Franch. et Savat. Enum. Pl. Jap.* i. p. 310; *Rev. Hort.* 1875, p. 308, cum figura.

Kiangsi: Kiukiang (*Maries*!); Hupeh: Patung district (*A. Henry*, 611, 3176, 3774, 4884!). Herb. Kew.

Japan.

Dr. Henry describes this as a tree 50 feet high.

1. **Styrax japonicum**, *Sieb. et Zucc. Fl. Jap.* i. p. 53, t. 23; *A. DC. Prodr.* viii. p. 266; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 101; *Franch. et Savat. Enum. Pl. Jap.* i. p. 309; *Regel, Gartenfl.* t. 583.

Cyrta japonica, *Miers, Contrib. Bot.* i. p. 182.

Hupeh: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*!); Corea: Chemulpo (*Carles*!); Luchu Archipelago (*Wright*!). Herb. Kew.

Japan.

2. **Styrax Obassia**, *Sieb. et Zucc. Fl. Jap.* i. p. 93, t. 46; *A. DC. Prodr.* viii. p. 260; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 101; *Franch. et Savat. Enum. Pl. Jap.* i. p. 309; *Bot. Mag.* t. 7039.

Corea: Port Chusan (*Wilford*, 934!). Herb. Kew.

Japan.

3. **Styrax odoratissimum**, *Champ. in Hook. Kew Journ. Bot.* iv. p. 304; *Walp. Ann.* v. p. 480; *Benth. Fl. Hongk.* p. 213; *Miers, Contrib. Bot.* i. p. 179, t. 29, B.

Kwangtung: Lantao Island (*native collector* ex *Ford*!); Hongkong (*Wright*! *Champion*!). Mus. Brit.; Herb. Kew.

4. **Styrax serrulatum**, *Roxb. Fl. Ind.* ii. p. 415; *A. DC. Prodr.* viii. p. 267; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 588; *Bot. Mag.* t. 5950, excl. syn. S. japonicum; *Hance in Journ. Bot.* 1878, p. 229; *Franchet, Pl. David.* p. 202 (var. virgatum).

Styrax Fortunei, *Hance in Journ. Bot.* 1882, p. 36.

Styrax grandiflorum, *Griff. Notul.* iv. p. 267, et *Ic. Pl. Asiat.* t. 423.

Cyrta agrestis, *Miers* (*an Lour.*?), *Contrib. Bot.* i. p. 181, t. 29, D.

Cyrta serrulata, *Miers, loc. cit.* p. 182.

Cyrta virgata, *Miers, loc. cit.* p. 182.

Chekiang: Ningpo (*Hancock*! *Cooper*!); Kiangsi: Kiukiang (*Maries*!); Fokien: Amoy (*Fortune*, 32!); Formosa (*Oldham*, 294!); Hupeh: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*!); Kwangtung: Pakwan (*Hance*, 13738!), in woods around the Buddhist monastery Filoitse (*Sampson & Hance*!), Macao (*Callery*!). Mus. Brit.; Herb. Kew.

Eastern India.

262 Var. **vestitum**, *Hemsl.*; ramulis foliisque tomentosis, racemis elongatis.

Kwangtung: Lofaushan (*Ford*, 105!). Herb. Kew.

5. **Styrax suberifolium**, *Hook. et Arn. Bot. Beech. Voy.* p. 196, t. 40; *A. DC. Prodr.* viii. p. 261; *Benth. in Hook. Kew Journ. Bot.* iv. p. 304, et *Fl. Hongk.* p. 213.

Cyrta suberifolia, *Miers, Contrib. Bot.* i. p. 182, t. 20, F.

China: without locality (*Millett*!); Formosa: Tamsui (*Oldham*, 293!); Szechuen: Mount Omei, 4000 feet (*Faber*!); Hongkong (*Wright*! *Champion*! *Wilford*!). Mus. Brit.; Herb. Kew.

6. **Styrax**, sp. n.?; glabrum vel cito glabrescens, ramulis gracilibus, foliis amplis tenuibus fere membranaceis graciliter petiolatis, fructu oblongo-ovoideo acuminato.

Szechuen: Mount Omei, 2500 feet (*Faber*!). Herb. Kew.

In addition to the foregoing, there are specimens in the Kew Herbarium of three other probably new species of *Styrax*, two from Nanto (*Henry*), and one from Poneshee, Yunnan (*Anderson*). There is neither flower nor fruit of any, but two of them bear the galls so characteristic of the genus.

85. OLEACEÆ: Jasmineæ.

1. **Jasminum floridum,** *Bunge, Enum. Pl. Chin. Bor.* p. 42; *DC. Prodr.* viii. p. 313; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 263; *Franch. et Savat. Enum. Pl. Jap.* i. p. 314; *Bot. Mag.* t. 6719.

Jasminum subulatum, *Lindl. in Bot. Reg.* 1842, *Append.* n. 58; *DC. Prodr.* viii. p. 312.

Chihli: Peking (*Bretschneider*!); Fokien: Amoy (*Fortune*, 62!); Hupeh: Ichang, Nanto and mountains to the northward (*A. Henry*!); Kansuh or Shensi (*Piasezki* ex *Maximowicz in litt.*). Mus. Brit.; Herb. Kew.

[*Jasminum humile,* Linn. (Bot. Reg. t. 350), syn. *J. revolutum,* Sims (Bot. Mag. t. 1731), a common Indian species, is cultivated in China, and may possibly occur in a wild state, though we have seen no specimens.]

1020 2. **Jasminum inornatum,** *Hemsl.*, n. sp.

Frutex scandens, cito glabrescens, ramulis floriferis gracillimis. *Folia* petiolata, unifoliolata, vix coriacea, ovato-oblonga vel interdum fere orbicularia, sæpius plus minusve acuminata, obtusa vel subacuta, absque petiolo sæpius 1–2 poll. longa, maxima 3 poll. longa, integra, supra præter costam impressam glabra, opaca, subtus obscure hispidula, simul secus costam minute strigillosa et ad axillas venarum primarium barbata; petiolus 3–5 lineas longus, cum lamina articulatus, persistens. *Flores* circiter semipollicares, pauci (3–4) ad apices pedunculorum terminalium axillariumque aggregati, pedunculis fere filiformibus foliis dimidio brevioribus; calycis crassi subcarnosi lobi breves, clavato-rotundati; corollæ hypocraterimorphæ tubus tenuis, lobis ovatis subacutis.

Kwangtung: without locality (*Ford*, 113!). Herb. Kew.

Not closely allied to any species known to us, though evidently nearest to *J. microcalyx*, Hance.

3. **Jasminum lanceolaria,** *Roxb. Fl. Ind. ed. Carey et Wall.* i. p. 97; *DC. Prodr.* viii. p. 310; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 601.

955 Var. **puberulum,** *Hemsl.*; foliis pallidis ramulisque puberulis.

Hupeh: Ichang, Nanto and mountains to the northward (*A. Henry*!). Herb. Kew.

Mountains of Eastern India.

4. **Jasminum laurifolium,** *Roxb. Fl. Ind. ed. Carey et Wall.* i. p. 91; *DC. Prodr.* viii. p. 303; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 597.

Jasminum angustifolium, ***Ker in Bot. Reg.*** **t. 521, nec *Vahl.***

YUNNAN (*Anderson* !). Herb. Kew.

Eastern India and Birma.

5. **Jasminum Mesnyi,** *Hance in Journ. Bot.* 1882, p. 37.

KWEICHAU: near Meichuchin, at 6000 feet (*Mesny*, hb. *Hance*, 21211 !). Mus. Brit.

6. **Jasminum microcalyx,** *Hance in Journ. Bot.* 1883, p. 323.

HAINAN: Hoihau (*B. C. Henry*, hb. *Hance*, 22171 !). Mus. Brit.

7. **Jasminum nudiflorum,** *Lindl. in Journ. Hort. Soc. Lond.* i. p. 153, et *Bot. Reg.* 1846, t. 48; *Walp. Rep.* vi. p. 463; *Bot. Mag.* t. 4649; *Franchet, Pl. David.* p. 206.

Jasminum Sieboldianum, ***Blume, Mus. Bot.*** **i. p. 280; *Franch. et Savat. Enum. Pl. Jap.*** **i. p. 314.**

Jasminum angulare, ***Bunge, Enum. Pl. Chin. Bor.*** **p. 42, non *Vahl.***

CHIHLI: Peking, cult. (*Bunge* ! *Bretschneider* !); KIANGSU: Shanghai and other places, cultivated (*Fortune*, 1 !). Mus. Brit.; Herb. Kew.

This species is only known in a cultivated state in Japan, and we have seen no wild specimens; but Franchet records it as common on both slopes of the Tsunglin range in Shensi.

[*Jasminum officinale*, Linn. (Bot. Mag. t. 31), a native of Persia and North-west India, is cultivated in China, as is likewise the closely allied North-west Indian *J. grandiflorum*, Linn. (Bot. Reg. t. 91); and Hance obtained specimens at Amoy.]

1021 8. **Jasminum pachyphyllum,** *Hemsl.*, n. sp.

Frutex erectus ?, undique glaberrimus, ramulis floriferis rigidis rectis compressis. *Folia* breviter petiolata, pinnatim trifoliolata; foliola fere æqualia vel plus minusve inæqualia, petiolulata, crasse coriacea, ovali-rotundata, 1½–2½ poll. longa, margine recurva, supra nitida, subtus pallidiora, minutissime punctata, venis immersis utrinque obscurissimis; petioluli 6–12 lineas longi, petiolum æquantes. *Flores* graciles, pollicares, ad apices ramulorum dense cymoso-paniculati, brevissime pedicellati, bracteis minutis; calyx parvus, cupulatus, obsolete 5-dentatus; corolla hypocraterimorpha, lobis parvis ovatis acutis.

Kwangtung: Lantao Island (*native collector* ex *Ford*!). Herb. Kew.

This is nearest to *J. paniculatum*, which has narrow leaflets and distinctly pedicellate flowers.

9. **Jasminum paniculatum**, *Roxb. Fl. Ind.* i. p. 97; *DC. Prodr.* viii. p. 310; *Benth. Fl. Hongk.* p. 216; *Bot. Reg.* t. 690.

Hongkong (*Hinds*! *Wright*! *Champion*!). Mus. Brit.; Herb. Kew.

10. **Jasminum pubescens**, *Willd. Sp. Pl.* i. p. 37; *Roxb. Fl. Ind.* i. p. 91; *DC. Prodr.* viii. p. 302; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 592.

Jasminum hirsutum, *Willd. Sp. Pl.* i. p. 36; *Smith, Exot. Bot.* ii. p. 117, t. 118; *Bot. Reg.* t. 15; *Bot. Mag.* t. 1931.

Jasminum multiflorum, *Andrews, Bot. Repos.* t. 496, vix *Roth.*

China (ex *Roxburgh*).

This common Indian species is recorded as Chinese by Roxburgh, and again recently by Clarke, in the place cited; but we have seen no specimens from China, where the closely allied *J. undulatum* is not uncommon.

11. **Jasminum Sambac**, *Ait. Hort. Kew*, ed. 1, p. 8; *DC. Prodr.* viii. p. 301; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 591; *Bot. Reg.* t. 1; *Bot. Mag.* t. 1785.

Nyctanthes Sambac, *Linn. Sp. Pl.* ed. 1, pl. 6; *Lour. Fl. Cochinch.* p. 21.

Kiangsu: Shanghai, cult.? (*Maingay*!). Mus. Brit.; Herb. Kew.

Commonly wild in India, where, as well as in other tropical countries of both hemispheres, it is generally cultivated.

618 12. **Jasminum sinense**, *Hemsl.*, n. sp.

Frutex scandens, fere undique molliter pubescens, ramulis floriferis teretibus. *Folia* petiolata, pinnatim trifoliolata; foliola valde inæqualia (lateralia multo minora brevissime petiolulata), papyracea ovata vel ovato-lanceolata (terminale cum petiolo sæpius 2–3 poll., interdum usque ad 6 poll. longum), acuminata simul apiculata, basi rotundata, margine leviter recurva, venis primariis lateralibus 4–5 costaque supra impressis subtus elevatis. *Flores* albi, sesquipollicares, confertim cymoso-paniculati, omnes distincte pedicellati, bracteis minutissimis; calycis pubescentis lobi 1½–2 lineas longi, quam tubus longiores; corolla glabra, hypocraterimorpha, tubo gracili, lobis circiter 6 lineas longis oblongis vix acutis. *Fructus* deest.

HUPEH: Nanto and mountains to the northward (*A. Henry*, 2106 ! 4464 !); KWANGTUNG: North river (*Ford*, 114 !). Herb. Kew.

13. **Jasminum subtriplinerve**, *Blume, Mus. Bot.* i. p. 272; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 596.

Jasminum trinerve, *auctor.*; *Hance, Journ. Bot.* 1878, p. 229, *an Vahl ?*

KWANGTUNG: without locality (*Ford* !), North river (*Sampson & Hance* !); HAINAN (*Bullock* !). Mus. Brit.; Herb. Kew.

Eastern India.

14. **Jasminum undulatum**, *Ker in Bot. Reg.* t. 436, non *Willd.*; *DC. Prodr.* viii. p. 302, excl. syn.; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 592; *Hance in Journ. Bot.* 1879, p. 13.

CHINA: without locality (*Millett* !); KIANGSU: Shanghai (*Maingay* !); KWANGTUNG: Whampoa (*Hance*, 5343 !), Pakhoi (*Playfair* !), Macao (*Gaudichaud* !); HONGKONG (*Wright* !). Mus. Brit.; Herb. Kew.

Eastern India.

Var. ? **elegans**, *Hemsl.*; glabrum omnino vel minute puberulum, foliis multo minoribus, floribus subsolitariis, corollæ lobis tubum fere æquantibus.

FORMOSA: west coast (*Wilford*, 533 !); KWANGTUNG: Pakhoi (*Playfair* !). Herb. Kew.

The Formosa specimen has narrow leaves, from half to three quarters of an inch long, and is very different in aspect from typical *J. undulatum*; but the Pakhoi specimen, although glabrous and the flowers not clustered, approaches nearer in the size and shape of the leaves.

933 15. **Jasminum urophyllum**, *Hemsl.*, n. sp.

Species *J. caudato* etiam *J. dispermo* valde affinis, sed foliis subtus puberulis pedunculis subtrifloris, floribus luteis.

SZECHUEN: Mount Omei at 5000 feet (*Faber* !). Herb. Kew.

This strongly resembles *J. dispermum*, and may be a yellow, few-flowered variety of that species. From *J. caudatum* it differs more in having distinctly three-nerved leaves.

[*Nyctanthes grandiflora*, Lour.,=*Jasminum arborescens*, Roxb., a common Indian species, was cultivated in China according to Loureiro (Fl. Cochinch. p. 21), but we have no other evidence of its existence even in China; and it does not appear to be a native of the eastern part of India.]

85. OLEACEÆ: Syringeæ.

1. **Forsythia suspensa**, *Vahl, Enum. Pl.* i. p. 39; *DC. Prodr.* viii. p. 281; *Bunge, Enum. Pl. Chin. Bor.* p. 42; *Franch. et Savat. Enum. Pl. Jap.* i. p. 312; *Debeaux, Fl. Tients.* p. 29; *Sieb. et Zucc. Fl. Jap.* i. p. 10, t. 3; *Bot. Mag.* t. 4995; *Darwin, Forms of Flowers*, 1877, p. 117.

Syringa suspensa, *Shunb. Fl. Jap.* p. 19, t. 3.

Shantung: Chefoo, rather rare in copses (*Hancock*!); Kansuh: Chinkiang (*Maries*!); Hupeh: Nanto and mountains to the northward (*A. Henry*, 3939, 4580!); Shensi and Kansuh (ex *Maximowicz* in litt.). Mus. Brit.; Herb. Kew.

Bunge records this as cultivated at Peking, and Franchet and Savatier regarded it as a Chinese introduction in Japan.

2. **Forsythia viridissima**, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 226, ii. p. 157, et *in Bot. Reg.* 1847, t. 39; *Walp. Ann.* i. p. 501; *Hance in Journ. Bot.* 1882, p. 37; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 236; *Bot. Mag.* t. 4587.

Chekiang: mountains in the interior (*Fortune*, 44!), Ningpo mountains (*Faber*!); Kiangsi: Kiukiang (*Maries*!); Hupeh: Ichang and immediate neighbourhood (*A. Henry*!); Kweichau: Shifung, at 6500 feet (*Mesney*, hb. *Hance*!). Mus. Brit.; Herb. Kew.

It is also generally cultivated in China.

1. **Syringa amurensis**, *Rupr. in Bull. Phys. Math. Acad. Sc. Pétersb.* xv. 1857, p. 371; *Maxim. Prim. Fl. Amur.* p. 194, β. pekinensis; *Franchet, Pl. David.* p. 205; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 435.

Syringa pekinensis, *Rupr. loc. cit. in nota*; *Decne. in Nouv. Arch. du Mus.* 2me série, ii. p. 43, t. 2.

Ligustrina amurensis, *Rupr. in Beitr. Kenntn. Fl. Russl.* xi. p. 55, et *Dec. Pl. Amur.* t. 9; *Maxim. in Mél. Biol.* ix. p. 395 (var. pekinensis).

Chihli: mountains near Peking (*Bretschneider*! *Bullock*!).

SHENSI OR KANSUH: Tsunglin range (ex *Maximowicz*). Mus. Brit.; Herb. Kew.

Japan and Mandshuria.

The differences between the Mandshurian, Japanese, and Chinese specimens are slight.

[*Syringa chinensis*, Willd. (Sp. Pl. i. p. 48; DC. Prodr. viii. p. 282; Decne. in Nouv. Arch. du Mus. 2me série, ii. p. 42), syn. *S. rothomagensis*, A. Rich., *S. dubia*, Pers., and *S. correlata*, A. Br. (ex Decne.), appears to be a cultivated hybrid; but its origin has been variously explained; and Debeaux (Fl. Tients. p. 29) states that it is cultivated in gardens around Tientsin. There is some confusion between this and *S. oblata*.]

2. **Syringa Emodi,** *Wall. Cat.* 2831; *Royle, Illustr.* p. 267, t. 65. fig. 2; *DC. Prodr.* viii. p. 283; *Franchet, Pl. David.* p. 204; *Bot. Reg.* 1845, t. 6.

CHIHLI: hills near Peking (*Tatarinow*!), Pohuashan (*David* ex *Franchet*); SHANSI: Siaowutaishan (*Mœllendorff*!); SZECHUEN: Mount Omei, 10,000 feet (*Faber*!). Herb. Kew.

Western Himalayas.

3. **Syringa oblata,** *Lindl. in Gard. Chron.* 1859, p. 868; *Franchet, Pl. David.* p. 205; *Decne. in Nouv. Arch. du Mus.* 2me série, ii. p. 40.

Syringa chinensis, *Blume, Enum. Pl. Chin. Bor.* p. 42, non *Willd.*

CHIHLI: Peking, cult. (*David* ex *Franchet*); SHINGKING: Peiling (*Webster*!). Herb. Kew.

Webster's specimen differs from the cultivated ones in the branches of the inflorescence and the calyx being pulverulent. Assuming this to be wild, it is the first known.

4. **Syringa villosa,** *Vahl, Enum.* i. p. 38; *DC. Prodr.* viii. p. 283; *Franchet, Pl. David.* p. 204; *Decne. in Nouv. Arch. du Mus.* 2me série, ii. p. 41; *Garden & Forest*, i. 1888, p. 521.

Syringa pubescens, *Turcz. in Bull. Soc. Nat. Mosc.* 1840, p. 73; *Hance in Journ. Bot.* 1875, p. 133.

CHIHLI: mountains near Peking (*Bretschneider*!); high up Mount Conolly (*Bullock*!). Mus. Brit.; Herb. Kew.

5. **Syringa vulgaris,** *Linn. Sp. Pl.* ed. 1, p. 9; *DC. Prodr.* viii.

p. 282; *Boiss. Fl. Or.* iv. p. 38; *Baker et S. Moore in Journ. Linn. Soc.* xviii. p. 384.

SHINGKING: Chienshan (*Ross* ?). Herb. Kew.

Eastern Europe.

The Chinese specimen is recorded as this species without doubt; but we regard it as insufficient for satisfactory determination.

6. **Syringa (§ Sarcocarpion) sempervirens,** *Franchet in Bull. Soc. Linn. Par.* 1886, p. 613.

YUNNAN: in the mountains above Tapintze at 2500 metres (*Delavay* ex *Franchet*).

85. OLEACEÆ: FRAXINEÆ.

1. **Fraxinus (§ Ornus) bracteata,** *Hemsl.*, n. sp.

Arbor 40-pedalis (*A. Henry*), ramis floriferis gracilibus rubentibus. *Folia* persistentia ?, laxe 5–7-foliolata, longiuscule petiolata, usque ad 9 poll. longa; foliola longe graciliterque petiolulata, coriacea, ovato-lanceolata vel interdum fere oblonga, inæqualia (terminali majore absque petiolulo interdum usque ad 5 poll. longo), obtusa, basi rotundata vel cuneata (lateralibus interdum obliquis), integra vel interdum apicem versus utrinque 1–3-crenata, supra glaberrima, nitida, costa impressa, subtus pallidiora, primum secus costam elevatam venasque paucas primarias pubescentia, citissimo glabrescentia, petiolulis sæpius curvatis. *Flores* numerosissimi, paniculati, distincte pedicellati, paniculis amplis ramulis gracillimis pedicellisque pubescentibus, bracteis oblongis persistentibus instructis; calyx cupularis, persistens; petala bene evoluta non visa. *Samara* (immatura tantum adsunt) anguste spatulata, obtusissima, deorsum valde attenuata.

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 1651, 3937 !). Herb. Kew.

Differs from *F. retusa,* Champ., in having entire leaflets, less capillary pedicels, and obtuse fruits; and from *F. Griffithii,* Clarke, in the very differently shaped fruit.

2. **Fraxinus Bungeana,** *DC. Prodr.* viii. p. 275; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Hance in Journ. Linn. Soc.* xiii. p. 83; *Franchet, Pl. David.* p. 203.

Fraxinus floribunda, *Bunge, Enum. Pl. Chin. Bor.* p. 61, non *Wall.*

Fraxinus obovata, *Blume, in Mus. Bot. Lugd.-Bat.* i. p. 311, ex *Maxim. in Mél. Biol.* ix. p. 396; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 434.

Fraxinus Ornus, *Linn.*, var. Bungeana, *Hance in Journ. Bot.* 1875, p. 133, partim.

CHIHLI: mountains near Peking (*Bunge*! *Bretschneider*! *Bushell*! *Bullock*! *Tatarinow*!). Mus. Brit.; Herb. Kew.

Japan.

Hance unites this with the European *F. Ornus*, Linn., without any doubt; and it does resemble specimens of that species from mountainous regions; but we are not satisfied of their specific identity. He seems, moreover, to have been under some misapprehension as to the dimensions of this species. On the authority of Bretschneider, or rather in Bretschneider's own words, he states that there were "vastes arbres au pied du Pohuashan." From specimens in the Kew Herbarium, collected by Bretschneider and incorrectly named *F. Bungeana*, it is evident that this note referred to *F. rhynchophylla*. The present species is a shrub or very small tree; and Bretschneider's note accompanying the specimen runs: "Small tree or shrub upon which, in North China, the wax insect, *Coccus Pela*, feeds."

Wenzig (Engler's Jahrb. iv. p. 170) reduces the Japanese *F. pubinervis*, Blume, of which we have seen no authenticated specimens, to this.

3. **Fraxinus chinensis**, *Roxb. Fl. Ind. ed. Carey & Wallich*, i. p. 150; *DC. Prodr.* viii. p. 277; *Bretschn. Early Res.* p. 18, et *Notes on Bot. Quest.* p. 9; *Hance in Journ. Bot.* 1883, p. 323; *Hanbury, Notes on Chinese Materia Medica, Science Papers*, p. 271, cum ic. xylogr.

CHEKIANG: Ningpo, broad and narrow leafleted varieties, and in flower (*Cooper*!), Ningpo mountains (*Faber*!); KIANGSU: Shanghai, cultivated variety, with obovoid leaflets (herb. *Hanbury*!); HUPEH: Nanto and mountains to the northward, in flower (*A. Henry*, 3815!); SZECHUEN: Chiating, cultivated (*Hosie*!); Mount Omei at 3000 feet (*Faber*!); KWANGTUNG: near Canton (*Hance*, 10681! "*longicuspis*"), without locality (*Ford*, 115!); ANWHEI: Tungcheng Hsien, Nganching Fu (*Scott*!). Mus. Brit.; Herb. Kew.

Western Tonking.

This is the white-wax tree, or *Pai-la-shu*, of several provinces: see Hosie's Report, 1885, ii. App. i. p. 25. Wenzig (Engler's Jahrb. iv. 1883, p. 187) reduces *F. chinensis*, Roxb., to *F. xan-*

thoxyloides, Wall., on what grounds we fail to comprehend. Specimens from Nanto connect this and the following variety.

674 Var. **rhynchophylla**, *Hemsl.*; foliolis sæpius 5, latioribus crenato-dentatis caudato-acuminatis, calyce breviore.

Fraxinus rhynchophylla, *Hance in Journ. Bot.* 1869, p. 164, et 1875, p. 134; *Franchet, Pl. David.* p. 203, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 236.

CHIHLI: Pohuashan (*Bretschneider* !), Jehol (*David*, 1703!); SHINGKING: Chienshan (*Ross* !). Mus. Brit.; Herb. Kew.

Mandshuria.

It is open to question whether the above is the best way of dealing with the forms here referred to one species. *F. mandshurica*, Rupr., is connected by intermediate forms with *F. rhynchophylla*, Hance; and several of the Indian species are evidently closely allied to the Chinese; so that it is difficult to limit the species without studying all the Asiatic forms, or indeed without studying the whole genus.

471 4. **Fraxinus** (§ **Ornus**) **insularis**, *Hemsl.*, n. sp.

Species ex affinitate *F. floribundæ* a qua differt foliolis longissime petiolulatis latissimis rotundatis vel breviter acuminatis remotissime obscure calloso-crenatis.

LUCHU ARCHIPELAGO (*Wright* !). Herb. Kew.

5. **Fraxinus mandshurica**, *Rupr. in Bull. Phys. Math Acad. Sc. Pétersb.* xv. 1857, p. 371; *Maxim. Prim. Fl. Amur.* p. 194, et *Mél. Biol.* ix. p. 395; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 435.

COREA: Chemulpo (*Carles* !); COREAN ARCHIPELAGO (*Oldham* !). Herb. Kew.

Mandshuria to Sachalin and Japan.

6. **Fraxinus Mariesii**, *Hook. f. Bot. Mag.* t. 6678.

CHINA: all, or nearly so, from Luschan mountains, Kiukiang (*Maries* !). Herb. Kew.

The plate in the 'Botanical Magazine,' where the species was founded, was drawn from specimens cultivated in England by Messrs. Veitch.

7. **Fraxinus retusa**, *Champ. in Hook. Kew Journ. Bot.* iv. p. 330; *Walp. Ann.* v. p. 485; *Benth. Fl. Hongk.* p. 214.

FOKIEN: Amoy (*Fortune*, 84!); HONGKONG (*Champion*! *Wright*! *Hance*!). Mus. Brit.; Herb. Kew.

1. **Fontanesia phillyreoides**, *Labill. Syr. Dec.* i. p. 9, t. 1; *DC. Prodr.* viii. p. 281; *Boiss. Fl. Or.* iv. p. 38; *Debeaux, Fl. Shangh.* p. 41 (var. sinensis); *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 32; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 225.

Fontanesia Fortunei, *Carr. in Rev. Hort.* 1859, p. 43, f. 9; *Hemsl. in Journ. Bot.* 1879, p. 212.

Fontanesia chinensis, *Hance in Journ. Bot.* 1879, p. 136.

Oleinearum genus novum?, *Hemsl. in Journ. Bot.* 1876, p. 208.

CHINA: without locality (*Fortune*, 45!); KIANGSU: Shanghai and neighbourhood (*Maingay*! *Perry*! *Forbes*!); CHEKIANG: mountains of Ningpo near a villiage (*Faber*!); KIANGSI: Kiukiang (*Maries*!). Mus. Brit.; Herb. Kew.

South-eastern Europe, Asia Minor, Syria.

Maximowicz suggests that this shrub may have been introduced into Eastern China, where, especially near Shanghai, it is commonly planted for hedges; and he may be right, for we have specimens from no locality that can be considered beyond suspicion.

85. OLEACEÆ: OLEINEÆ.

1. **Osmanthus Aquifolium**, *Benth. et Hook. f. Gen. Plant.* ii. p. 677; *Gard. Chron.* n. s. vi. p. 689, f. 132.

Olea Aquifolium, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 562; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 264; *Franch. et Savat. Enum. Pl. Jap.* i. p. 312.

Ilex Aquifolium, *Thunb. Fl. Jap.* p. 79, non *Linn.*

Osmanthus ilicifolius, *Hort.*; *Gard. Chron.* n. s. vii. p. 239, f. 38.

CHINA: A cultivated specimen in the Kew Herbarium from Messrs. Veitch of Chelsea, recorded as of Chinese origin. Herb. Kew.

Apparently common in Japan.

In herb. Forbes is a cultivated specimen of a variety of thin having small, very thick, strongly veined leaves.

2. **Osmanthus (§ Siphosmanthus) Delavayi**, *Franchet in Bull. Soc. Linn. Par.* 1886, p. 613.

YUNNAN: mountains near Lankong at 2800 metres (*Delavay ex Franchet*).

3. **Osmanthus fragrans**, *Lour. Fl. Cochinch.* p. 28; *DC. Prodr.* viii. p. 291; *Hance in Journ. Bot.* 1882, p. 37, et 1883, p. 323; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 606; *Debeaux, Fl. Shangh.* p. 42; *Bot. Mag.* t. 1552.

Olea fragrans, *Thunb. Fl. Jap.* p. 18, t. 2; *Franch. et Savat. Enum. Pl. Jap.* i. p. 312.

CHIHLI: Peking, cultivated? (*Bretschneider*!); CHUSAN ARCHIPELAGO (*Cantor*!); FORMOSA: Kelung, cultivated (*Oldham*, 311?); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*!). Mus. Brit.; Herb. Kew.

North India, from Gurwhal to the Khasia mountains, and in Japan.

Dr. Henry sends specimens with thorny, strongly veined leaves on short thick petioles.

pl 4. **Osmanthus Fordii**, *Hemsl.*, n. sp.

Frutex parvus (*Ford*), undique glaberrimus, dense ramosus, ramulis floriferis graciliusculis, cortice pallido, internodiis brevissimis. *Folia* breviter petiolata, crasse coriacea, ovali-oblonga vel elliptica, 1½–2½ poll. longa, utrinque obtusissima vel rotundata, integerrima, margine incrassata, venis immersis inconspicuis. *Flores* in axillis foliorum superiorum conferti, brevissime pedicellati; calyx tenuissimus, obscure irregulariterque 4-lobatus, lobis denticulatis; corolla crassa, subcarnosa, rotata, lobis latis rotundatis; stamina 2, filamentis brevibus, antheris magnis orbicularibus loculis discretis; ovarium glabrum. *Fructus* non visus.

KWANGTUNG: without locality (*Ford*, 116!). Herb. Kew.

5. **Osmanthus marginatus**, *Benth. et Hook. f. Gen. Pl.* iii. p. 677.

Olea marginata, *Champ. in Hook. Kew Journ. Bot.* iv. p. 330; *Walp. Ann.* v. p. 483; *Benth. Fl. Hongk.* p. 215.

HONGKONG (*Champion*!). Herb. Kew.

[*Olea ovalis*, Miq. (Journn. de Bot. Néerl. i. p. 111), from the province of Kwangtung, may belong to *Osmanthus*.]

✓ 1. **Chionanthus retusus**, *Lindl. et Paxt. in Paxt. Fl. Gard.* iii. p. 85, fig. 273; *Walp. Ann.* v. p. 482; *Maxim. in Mél. Biol.* ix. p. 653.

Chionanthus chinensis, *Maxim. in Mél. Biol.* ix. p. 393; *Franch. et Savat. Enum. Pl. Jap.* i. p. 312.

Linociera chinensis, *Fisch. in Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474.

Chihli : North of Peking (*Tatarinow* ex *Maximowicz*) ; Kiangsi : Kiukiang (*Maries* !) ; Fokien : Foochow and Amoy (*Fortune*, 37, 84 !) ; Formosa (*Hance* ex *Maximowicz*). Mus. Brit. ; Herb. Kew.

Japan.

1. **Linociera cambodiana**, *Hance in Journ. Bot.* 1877, p. 335, *et* 1887, p. 12.

Hainan (*B. C. Henry*, hb. *Hance* !). Mus. Brit.

Cochinchina.

1. **Ligustrum brachystachyum**, *Decne. in Nouv. Arch. du Mus. Par.* 2me série, ii. p. 34 ; *Franchet, Pl. David.* p. 205.

Kiangsi : Kiukiang (*Shearer* !) ; Hupeh : Ichang, Nanto and mountains to the northward (*A. Henry*, 215, 1631, 1937, 3973, 4372 !).

Dr. Henry sends copious specimens of what we take to be this species, which was founded on imperfect materials. All his specimens differ from Shearer's type specimens in the much narrower leaves. Decaisne's description may be supplemented as follows :—

Frutex 4–6-pedalis (*A. Henry*), ramis rigidis, ramulis brevibus lateralibus spinescentibus. *Folia* anguste oblongo-lanceolata vel oblanceolata, deorsum attenuata. *Flores* albo-virides vel albo-lutei, subsessiles. *Fructus* obliquus, brevissime pedicellatus.

2. **Ligustrum Calleryanum**, *Decne. in Nouv. Arch. du Mus. Par.* 2me série, ii. p. 36.

Kwangtung : Macao (*Callery*, 266, ex *Decaisne*).

We have seen no authenticated specimen of this ; but judging from the description, it is probably a variety of *L. sinense*, Lour.

3. **Ligustrum confusum**, *Decne. in Nouv. Arch. du Mus. Par.* 2me série, ii. p. 24, excl. hab. Nilgherries ; *Clarke, in Hook. f. Fl. Brit. Ind.* iii. p. 616 ?

Yunnan : Poneshee (*Anderson* !). Herb. Kew.

Sikkim and Khasia mountains.

Two or three of the Indian species of this affinity are very difficult to distinguish from each other in the absence of fruit.

4. **Ligustrum coriaceum**, *Carr. Rev. Hort.* 1874, p. 418, fig. 56, et 1888, p. 440, fig. 101; *Decne. in Flore des Serres*, xxii. 1877, p. 8, sub *L. lucido.*

We have seen no undoubtedly wild specimens of this, which Decaisne treats as a variety of the widely different Chinese *L. lucidum.* There is a specimen in the Kew Herbarium, collected by Oldham and labelled "Japanese and Corean Archipelago Collections," 1861–63.

875 5. **Ligustrum deciduum**, *Hemsl.*, n. sp.

Frutex glaber, ramosus, ramulis floriferis gracilibus, cortice pallido, lenticellato. *Folia* breviter petiolata, tenuia, decidua, orbicularia vel oblongo-elliptica, 6–12 lineas diametro, venis inconspicuis. *Flores* racemoso-paniculati, breviter pedicellati, pedicellis crebre lenticellatis. *Fructus* parvus, sphæroideus.

HUPEH: Nanto and mountains to the northward (*A. Henry*!). Herb. Kew.

The flowers of this are unknown, but in other respects it is nearest related to *L. vulgaris*, Linn., differing conspicuously in its rounded leaves.

599 6. **Ligustrum Henryi**, *Hemsl.*, n. sp.

Frutex dense ramosus, ramulis hornotinis pubescentibus exceptis, glaber, ramulis floriferis gracilibus. *Folia* brevissime petiolata, coriacea, persistentia, diversiformia, rotundato-ovata, interdum orbicularia interdum ovato-lanceolata, 3–18 lin. longa vel diametro, sæpius obtuse acuminata, subtus pallidiora, venis immersis inconspicuis. *Flores* albo-maculati, fragrantes (*A. Henry*), glabri, fasciculato-subspicati, brevissime pedicellati; calyx cupularis, obsolete dentatus; corolla crassa, infundibularis, lobis latis obtusis. *Fructus* niger (*A. Henry*), oblongus.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3124, 3310, 3575!). Herb. Kew.

This is very near *L. Tschonoskii*, differing markedly in the shape of the leaves, which in the present species vary much in size and shape on the same branch.

7. **Ligustrum Ibota,** *Sieb. in Verh. Batav.* xii. p. 36; *Franch. et Savat. Enum. Pl. Jap.* i. p. 313; *Hance in Journ. Bot.* 1878, p. 110; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 32; *Decne. in Nouv. Arch. du Mus. Par.* 2me série, ii. p. 17; *Blume, Mus. Bot. Lugd.-Bat.* i. p. 312 (varietates *obovatum, angustifolium* et *velutinum*).

Ligustrum vulgare, *Thunb. Fl. Jap.* p. 17, non *Linn.*

Ligustrum obtusifolium, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 567; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 263.

Ligustrum amurense, *Carr. Rev. Hort.* 1861, p. 352, fig. 85, ex *Decne.*

Ligustrum ciliatum, *Sieb., Blume Mus. Bot. Lugd.-Bat.* i. p. 312.

SHANTUNG: Chefoo (*Stuhlmann*, hb. *Hance*!); KIANGSU: Shanghai (*Perry*!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Amoy (*Fortune*, 6); HUPEH: Patung district (*A. Henry*!); COREA: Chemulpo (*Carles*!); COREAN ARCHIPELAGO (*Oldham*, 541!). Mus. Brit.; Herb. Kew.

Japan and Sachalin.

There are two samples of white wax in the Kew Museum said to be the product of *Ligustrum Ibota.*

8. **Ligustrum japonicum,** *Thunb. Fl. Jap.* p. 17, t. 1; *DC. Prodr.* viii. p. 293; *Hance in Journ. Linn. Soc.* xiii. p. 82; *Decne. in Nouv. Arch. du Mus. Par.* 2me série, ii. p. 20; *Paxt. Fl. Gard.* ii. p. 117, fig. 196; *Franch. et Savat. Enum. Pl. Jap.* i. p. 313.

Ligustrum ovalifolium, *Hassk. Cat. Hort. Bogor.* p. 119.

Ligustrum Kellerianum, *Vis. in Mem. Inst. Pad.* vi. 1856, ex *Decne.*

Ligustrum spicatum, *Hort.* (non *Don*), L. syringæflorum, *Hort.*, L. Sieboldii, *Hort.*, L. glabrum, *Hort.*, L. californicum, *Hort.* ex *Decne. loc. cit.*

Ligustrum reticulatum, *Blume in Mus. Bot. Lugd.-Bat.* i. p. 313.

Ligustridium japonicum, *Spach, Hist. Veg.* viii. p. 272, partim.

CHIHLI: Peking cult. (*Bretschneider*, hb. *Hance*!); KIANGSU (*Poli* ex *Franchet*); FORMOSA: Tamsui (*Oldham*, 310!), Kelung (*Ford*!); HONGKONG: bushes four feet high on Victoria peak (*Ford*, 7!); COREAN ARCHIPELAGO (*Oldham*, 539!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan and Bonin Islands.

Hance (Journ. Linn. Soc. xiii. p. 82), under this species, says, "this, Dr. Bretschneider states, on native authority, is used for rearing the wax insect on;" but we suspect that this note referred to *L. lucidum*, Ait.

9. **Ligustrum lucidum**, *Ait. Hort. Kew.* ed. 2, i. p. 19; *DC. Prodr.* viii. p. 293; *Decne. in Nouv. Arch. du Mus. Par.* 2^{me} série, ii p. 20; *Bot. Mag.* t. 2565; *Hanbury, Insect White-wax Tree of China, Science Papers*, p. 67; *Bretschn. Early Res.* p. 18; *Hosie, Consular Report*, 1885, ii. *App.* i. p. 24; *Bretschn. Notes on Bot. Quest.* p. 9.

Ligustridium japonicum, *Spach, Hist. Veg.* viii. p. 272, partim.

Phillyrea paniculata, *Roxb. Fl. Ind. ed. Carey et Wallich*, i. p. 100, ed. alt. i. p. 100; *Rœm. et Schult. Syst. Veg.* i. Mant. i. p. 82; *Wight, Ic. Pl. Ind. Or.* t. 736.

Olea clavata, *G. Don, Gen. Syst.* iv. p. 49.

Visiania paniculata, *DC. Prodr.* viii. p. 289.

Ligustrum Roxburghii, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 315, non *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 615.

Chionanthes terminalis, *hb. Roxb., in Herb. Kew.*

KIANGSU: Shanghai (*Faber* !); ANWHEI: Tungcheng Hsien, Nganching Fu (*Scott* !); HUPEH: Ichang, Nanto and mountains to the northward, the commonest evergreen tree, from 20 to 30 feet high (*A. Henry* !); SZECHUEN: Chienchang, cultivated (*Hosie* !); Min river, cultivated (*Faber* !); KWANGTUNG: without locality (*Ford*). Mus. Brit.; Herb. Kew.

One of the most important of the white-wax trees.

10. **Ligustrum molliculum**, *Hance in Journ. Bot.* 1882, p. 291.

Phlyarodoxa leucantha, *S. Moore, in Journ. Bot.* 1875, p. 229.

ANWHEI: near Wuhu (*Bullock*, hb. *Hance*, 22003 !); KIANGSI: Kiukiang (*Shearer* !). Mus. Brit.; Herb. Kew.

11. **Ligustrum Quihoui**, *Carr. Rev. Hort.* 1869, p. 377; *Decne. in Nouv. Arch. du Mus. Par.* 2^{me} série, ii. p. 35.

CHINA (ex *Carrière*). Cultivated specimens in the Kew Herbarium, without flowers.

12. **Ligustrum robustum**, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 313; *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 614.

Visiania robusta, *DC. Prodr.* viii. p. 289; *Deless. Ic. Sel.* v. t. 44.

Phillyrea robusta, *Roxb. Fl. Ind. ed. Carey & Wallich*, i. p. 101.

SZECHUEN: Mount Omei, at 2500 feet (*Faber* !). Herb. Kew. Eastern India and Birma.

13. **Ligustrum sinense**, *Lour. Fl. Cochinch.* p. 19; *DC. Prodr.* viii. p. 294; *Benth. in Hook. Kew Journ. Bot.* iv. p. 331, et *Fl. Hongk.* p. 215; *Decne. in Nouv. Arch. du Mus. Par.* 2^{me} série, ii. p. 36; *Gard. Chron.* n. s. x. (1878), p. 364, fig. 64.

Olea Walpersiana, *Hance in Walp. Ann.* iii. p. 17.

Olea consanguinea, *Hance, loc. cit.* p. 18.

Ligustrum villosum, *May in Rev. Hort.* 1874, p. 299, et 1875, p. 460.

Ligustrum Stauntoni, *DC. Prodr.* viii. p. 294; *Decne. in Nouv. Arch. du Mus. Par.* 2^{me} série, ii. p. 37.

Ligustrum chinense, *Carr. in Rev. Hort.* 1863, p. 88, ex *Decne.*

CHINA: without locality (*Staunton*! *Fortune*, 155!); KIANGSU: Shanghai (*Maingay*!); FOKIEN: Amoy (*Fortune*, 64!); HUPEH: Ichang, Patung, Nanto mountains to the northward (*A. Henry*!); HONGKONG (*Champion*! *Wright*! *Urquhart*! *Wilford*!). Mus. Brit.; Herb. Kew.

There may be more than one species included under this. The forms are numerous, and the extremes differ much more from each other than the originals of *L. sinense* and *L. Stauntoni*, and they vary in stature from five to thirty feet. Dr. Henry mentions in his notes that he is of opinion that the specimens represent more than one species; yet we have failed to distinguish them. *Ligustrum parviflorum*, Vis. (*ex* Decne. in Nouv. Arch. du Mus. Par. 2^{me} série, ii. p. 26), comes very near, and may be a garden variety.

Dr. Henry states that his 906 was reported to be a tree on which the wax-insect lives.

Decaisne refers *Phlyarodoxa leucantha*, S. Moore, to this species; but it is clear that he never saw the specimen.

854 14. **Ligustrum strongylophyllum**, Hemsl., n. sp.

Frutex vel arbor parva (*A. Henry*), fere omnino glaberrima, ramulis floriferis graciliusculis primum minute puberulis. *Folia* breviter petiolata, crasse coriacea, persistentia, orbicularia, obovata vel interdum ovali-oblonga, 6–12 lineas longa, integerrima, supra nitida, venis immersis obsoletis. *Flores* mediocres, laxe paniculati, distincte pedicellati; calyx cupularis, obscurissime denticulatus; corolla breviter infundibularis, lobis ovatis vix acutis. *Fructus* parvus, globosus.

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 1286, 1559, 2029, 3104!). Herb. Kew.

Small, thick, very obscurely veined leaves characterize this species.

86. APOCYNACEÆ: CARISSEÆ.

1. **Melodinus fusiformis,** *Champ. in Hook. Kew Journ. Bot.* iv. p. 332; *Walp. Ann.* v. p. 490; *Benth. Fl. Hongk.* p. 218.

HONGKONG (*Champion*! *Wilford*! *Ford*!). Mus. Brit.; Herb. Kew.

2. **Melodinus monogynus,** *Roxb. Fl. Ind.* ii. p. 56; *A. DC. Prodr.* viii. p. 329; *Fl. Hongk.* p. 218; *Hook. f. Fl. Brit. Ind.* iii. p. 629; *Bot. Reg.* t. 834; *Bot. Mag.* t. 2527.

Melodinus lætus, *Champ. in Hook. Kew Journ. Bot.* iv. p. 332.

HONGKONG (*Champion*! *Wilford*! *Urquhart*!). Mus. Brit.; Herb. Kew.

Eastern India and Malaya.

The limits of this species have been variously defined, and it should perhaps include *M. fusiformis*, Champ.

3. **Melodinus suaveolens,** *Champ. in Hook. Kew Journ. Bot.* iv. p. 333; *Benth. Fl. Hongk.* p. 218.

Lycimnia suaveolens, *Hance in Walp. Ann.* iii. p. 30.

CHINA: without locality (*Millett*!); HONGKONG (*Wilford*! *Champion*! *Wright*! *Urquhart*! *Tate*! *Ford*!). Mus. Brit.; Herb. Kew.

Melodinus Cumingianus, A. DC. (Prodr. viii. p. 330), from the Philippine Islands, is perhaps the same as this.

4. **Melodinus** ? sp. n.; ramulis floriferis, petiolis pedicellis calycibusque pubescentibus, calycis lobis acutis, corollæ lobis ovato-oblongis squamis parvis notatis.

SZECHUEN: Mount Omei, at 3000 feet (*Faber*!). Herb. Kew.

This is distinct from the foregoing, but there is only one branchlet, bearing five or six leaves, and a few flowers.

[*Allamanda cathartica*, Linn. (Benth. Fl. Hongk. p. 217; Bot. Mag. t. 338), a native of tropical South America, is naturalized in Hongkong and other parts of the Old World.]

[" *Leuconotis*, sp. n.?," Benth. (Hook. Kew Journ. Bot. iv. p. 333), from Hongkong, collected by Eyre, has been removed to the genus *Gærtnera* by Seemann.]

[*Carissa Carandas*, Linn. (DC. Prodr. viii. p. 332), a common Indian and Malayan shrub, is recorded from China by De Candolle, but we have seen no Chinese specimens.]

86. APOCYNACEÆ: Plumerieæ.

1. **Rauwolfia chinensis,** *Hemsl.*

Ophioxylon chinense, *Hance in Journ. Bot.* 1865, p. 380.

Formosa (*Oldham*, 323!); Kwangtung: along the West river, on the frontier of Kwangsi and other localities (*Sampson*! *Hance*, 11433! *Wenyon*!). Mus. Brit.; Herb. Kew.

1. **Alyxia sinensis,** *Champ. in Hook. Kew Journ. Bot.* iv. p. 493; *Benth. Fl. Hongk.* p. 219.

Hongkong (*Wilford*! *Champion*! *Wright*! *Urquhart*!). Mus. Brit.; Herb. Kew.

1. **Cerbera Odollam,** *Gærtn. Fruct.* ii. p. 193, t. 124; *A. DC. Prodr.* viii. p. 353; *Hook. f. Fl. Brit. Ind.* iii. p. 638; *Benth. Fl. Hongk.* p. 219; *Seem. Bot. Voy. 'Herald,'* p. 399; *Wight, Ic. Pl. Ind. Or.* t. 441; *Bot. Mag.* t. 1845 (C. Manghas).

Formosa (*Oldham*, 321!); Hongkong (*Hinds*! *Wilford*! *Seemann*! *Urquhart*!); Hainan (*Swinhoe*!). Mus. Brit.; Herb. Kew.

A sea-side tree of India, Malaya, Polynesia, and Tropical Australia.

1. **Vinca rosea,** *Linn. Sp. Pl.* ed. 2, p. 305; *A. DC. Prodr.* viii. p. 382; *Lour. Fl. Cochinch.* p. 118; *Benth. Fl. Hongk.* p. 220; *Bot. Mag.* t. 248.

This plant is supposed to be a native of tropical America, but it is now so firmly established in many parts of the Old World as to have all the appearance of being indigenous. A hundred years ago, according to Loureiro, it existed in China, both wild and cultivated, and now it is common, often clothing the sand-hills by the sea in Formosa and Southern China. Mus. Brit.; Herb. Kew.

[*Plumeria acutifolia*, Poiret (Bot. Reg. t. 114; Bot. Mag. t. 3952), syn. *P. obtusa*, Lour. (Fl. Cochinch. p. 117), not of Linnæus, an American tree, is cultivated in China and India.]

1. **Alstonia,** sp.

Yunnan: Momyen (*Anderson*!). Herb. Kew.

Allied to *A. macrophylla*, Wall., but apparently different, though the specimen consists of only seed-vessels.

1. **Tabernæmontana coronaria,** *R. Br. in Ait. Hort. Kew.* ed. 2, ii. p. 72; *A. DC. Prodr.* viii. p. 373; *Hook. f. Fl. Brit. Ind.* iii. p. 646.

Cultivated in India and China and other countries; native country unknown. Mus. Brit.; Herb. Kew.

2. **Tabernæmontana mollis,** *Hook. et Arn. Bot. Beech. Voy.* p. 199; *A. DC. Prodr.* viii. p. 376.

"CHINA."

There is no specimen of this plant in the Hookerian Herbarium at Kew.

3. **Tabernæmontana,** sp.?

SOUTH-WEST FORMOSA (*Swinhoe*!). Herb. Kew.

Specimen insufficient for satisfactory determination, and possibly not of this genus.

[*Holarrhena affinis*, Hook. et Arn. (Bot. Beech. Voy. p. 198), is an obscure plant, recorded from China, of which we have seen no specimen.]

86. APOCYNACEÆ: ECHITIDEÆ.

1. **Parsonsia spiralis,** *Wall. Cat.* n. 1631; *A. DC. Prodr.* viii. p. 402; *Hook. f. Fl. Brit. Ind.* iii. p. 650.

FORMOSA: north-east coast (*Wilford*, 398!). Herb. Kew.

Widely spread in India and Malaya.

[*Parsonsia Helicandra*, Hook. et Arn. (Bot. Beech. Voy. p. 197), syn. *Helicandra sinensis*, ibid. p. 198, from China, is only known to us from the description.]

1. **Pottsia cantonensis,** *Hook. et Arn. Bot. Beech. Voy.* p. 199, t. 43; *Benth. Fl. Hongk.* p. 222; *Hook. f. Fl. Brit. Ind.* ii. p. 652.

Pottsia Hookeriana, *Wight, Ic. Pl. Ind. Or.* t. 1306 bis.
Pottsia ovata, *A. DC. Prodr.* viii. p. 442.
Parsonsia ovata, *Wall. Cat.* 1630.

Teysmannia laxiflora, *Miq.*, *et* T. Hookeriana, *Miq. Fl. Ind. Bat.* ii. pp. 455, 456.

Parapottsia, *Miq. loc. cit.* p. 1080.

Euthodon paniculata, *Griff. Notul.* iv. p. 84, et *Ic. Pl. Asiat.* t. 458. f. 2.

Vallaris laxiflora, *Blume, Bijdr.* p. 1043.

China: without locality (*Fortune*, 55! *Millett*!); Kwangtung: Lofaushan, at 3000 feet (*Ford*!); Hongkong (*Wright*! *Champion*!). Mus. Brit.; Herb. Kew.

1. **Wrightia pubescens**, *R. Br. in Mem. Wern. Soc.* i. p. 73; *DC. Prodr.* viii. p. 405; *Miq. Fl. Ind. Bat.* ii. p. 432; *Benth. Fl. Austral.* iv. p. 316; *Hance in Journ. Bot.* 1878, p. 229.

Kwangtung (*Reeves*! *Ford*!); Hainan: near Hoihau (*Hance*, 13724! *Hancock*!). Mus. Brit.; Herb. Kew.

Malayan Archipelago to the Philippine Islands and North Australia.

1. **Nerium odorum**, *Soland. in Ait. Hort. Kew.* ed. 1, i. p. 297; *DC. Prodr.* viii. p. 420; *Hook. f. Fl. Brit. Ind.* iii. p. 655; *Bot. Mag.* tt. 1799 et 2032.

Chihli: Peking, cult. (*Bretschneider*!); Kwangtung (*Tate*! *Wenyon*!). Mus. Brit.; Herb. Kew.

A native of North India, probably only cultivated in China and Japan. Possibly a variety of *N. Oleander*, Linn., which is found in the Mediterranean region eastward to Persia, and is also widely cultivated.

1. **Strophanthus divergens**, *Grah. in Edinb. New Philosoph. Journ.* June 1827, p. 177, et *in Maund's Botanist*, iii. t. 150; *DC. Prodr.* viii. p. 417; *Benth. Fl. Hongk.* p. 220; *Miq. in Journ. de Bot. Néerl.* i. p. 111; *Henriques in Bol. Soc. Brot.* iii. p. 146.

Strophanthus dichotomus β. chinensis, *Ker, Bot. Reg.* t. 469, excl. synon. nonnul.

Pergularia divaricata, *Lour. Fl. Cochinch.* p. 169?

Fokien: Amoy (*Fortune*, 120! *Swinhoe*!); Kwangtung: Macao (*Staunton*! *Callery*!), Pukak (*Krone* ex *Miquel*); Hongkong (*Hinds*! *Wright*! *Champion*! *Wilford*!); Hainan: without locality (*Swinhoe*!), Hoihau (*Hancock*!). Mus. Brit.; Herb. Kew.

1. **Ecdysanthera micrantha,** *A. DC. Prodr.* viii. p. 442; *Benth. Fl. Hongk.* p. 222; *Hook. f. Fl. Brit. Ind.* iii. p. 662.

Ecdysanthera brachiata, *A. DC. Prodr.* viii. p. 443; *Kurz, Forest Flora Burma,* ii. p. 189.

HONGKONG (*Wright*!) Herb. Kew.

Common in Eastern India and Burma.

2. **Ecdysanthera rosea,** *Hook. et Arn. Bot. Beech. Voy.* p. 198, t. 42; *DC. Prodr.* viii. p. 442; *Benth. Fl. Hongk.* p. 222.

Ecdysanthera pedunculosa, *Miq. Fl. Ind. Bat., Suppl.* i. p. 557?

CHINA: without locality (*Millett*!); FORMOSA (*Oldham*, 328!); KWANGTUNG: Macao and neighbourhood (*Vachell*!); HONGKONG (*Wilford*! *Champion*! *Wright*!). Mus. Brit.; Herb. Kew.

Java and Sumatra.

1. **Apocynum venetum,** *Linn. Sp. Pl.* ed. 1, p. 213; *DC. Prodr.* viii. p. 440; *Maxim. Ind. Fl. Pek., in Prim. Fl. Amur.* p. 474; *Hance in Journ. Bot.* 1883, p. 323; *Franchet, Pl. David.* p. 206, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 234; *Hook. f. Fl. Brit. Ind.* iii. p. 657; *Aitch. in Trans. Linn. Soc.* 2nd series, *Bot.* iii. p. 87, t. 37; *Ledeb. Fl. Ross.* iii. p. 43; *Franch. et Savat. Enum. Pl. Jap.* i. p. 316; *Debeaux, Fl. Tchef.* p. 95.

Apocynum sibiricum, *Pallas*; *Ledeb. Ic. Pl. Fl. Ross.* t. 240; *Bunge, Enum. Pl. Chin. Bor.* p. 43.

CHIHLI: near Peking (*Bunge*! *Swinhoe*! *David*! *Bretschneider*!); SHINGKING: Talienhwan (*Swinhoe*!); SHANTUNG: Chefoo (*Perry*!). Mus. Brit.; Herb. Kew.

Southern Europe and Asia Minor through Siberia and Northern India to Mandshuria and Japan.

[*Apocynum alternifolium,* Lour. (Fl. Cochinch. p. 168), is an obscure plant recorded from the islands near Canton.]

6045 1. **Anodendron? Benthamianum,** *Hemsl.*, n. sp.

Frutex, ut videtur, scandens, undique glaber, ramulis teretibus resiniferis. *Folia* breviter petiolata, subcoriacea, oblongo-lanceolata, cum petiolo 3–5 poll. longa, acute acuminata, basi cuneata, subtus pallidiora, venis primariis lateralibus utrinque 8–10 sat conspicuis. *Flores* pro genere magni (circiter 1 poll. longi diametroque), in cymas parvas compactas terminales quam folia breviores dispositi, pedicellis brevibus juxta flores bibracteolatis,

bracteolis sepalis simillimis; calycis segmenta ovato-lanceolata, acuta, circiter 3 lineas longa, margine membranacea; corolla hypocraterimorpha, lobis angustis contortis patentibus tubo æquilongis, tubo intus squamuligero; stamina prope basin tubi subsessilia, antheris magnis sagittatis, apice membranaceo-appendiculatis. *Folliculi* ignoti.

FORMOSA: Tamsui (*Oldham*, 324!) Herb. Kew.

The flowers of this are considerably larger than those of the other species of *Anodendron*, and in the absence of fruit the genus remains doubtful. It is the plant alluded to under this genus in the 'Genera Plantarum,' ii. p. 719.

2. **Anodendron læve**, *Maxim. in litt.*, ex *Franch. et Savat. Enum. Pl. Jap.* i. p. 315 (1875); *Benth. et Hook. Gen. Pl.* ii. p. 717, *sub* Ichnocarpo, et p. 719 (1876).

Aganosma lævis, *Champ. in Hook. Kew Journ. Bot.* iv. p. 335; *Walp. Ann.* v. p. 496; *Benth. Fl. Hongk.* p. 221.

Holarrhena affinis, *Hook. et Arn. Bot. Beech. Voy.* p. 198?, ex *Benth. loc. cit.*

CHINA: without locality (*Fortune*!); FORMOSA: Tamsui (*Oldham*, 322!); KWANGTUNG: Macao (*Gaudichaud*!); HONGKONG (*Hinds*! *Wilford*! *Wright*! *Champion*!). Mus. Brit.; Herb. Kew.

Japan.

6232 1. **Trachelospermum Bowringii**, *Hemsl.*

Parechites Bowringii, *Hance in Journ. Bot.* 1868, p. 299.

HONGKONG (*Ford*! *Bowring*! *Sampson*, hb. *Hance*, 1867, 6006!). Mus. Brit.; Herb. Kew.

✓ 2. **Trachelospermum jasminoides**, *Lemaire, Jard. Fleur.* i. t. 61, ic. *Moore et Henfrey, Mag. Bot.* ii. p. 113, mutuata; *Franchet, Pl. David.* p. 206; *Maxim. in Engler's Jahrb.* vi. p. 65; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 438; *Gard. Chron.* n. s. vii. p. 116, f. 19.

Rhynchospermum jasminioides, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 74, cum figura; *Walp. Ann.* iii. p. 920; *Moore et Henfrey, Mag. Bot.* ii. p. 113, cum ic. color.; *Bot. Mag.* t. 4737; *Lindl. & Paxt. Fl. Gard.* ii. p. 26, fig. 147; *Benth. Fl. Hongk.* p. 221; *Walp. Ann.* v. p. 498.

Malouetia asiatica, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 39.

Parechites Thunbergii, *A. Gray in Mem. Amer. Acad.* 2nd series, vi. p. 403.

Echites saligna, *Delile* ex *Benth. Fl. Hongk.* 221.

Parechites adnascens, *Hance in Journ. Bot.* 1868, p. 299.

KIANGSU: hills near Shanghai (*Carles* !); CHEKIANG: Ningpo (*Cooper* !); KIANGSI: Kiukiang (*Shearer* !); FOKIEN: Amoy (*Fortune*, 453 ! *Sampson*, hb. *Hance*, 11071 !); FORMOSA (*Oldham*, 329 ! *Playfair* !) HUPEH: Ichang, Nanto, and mountains to the northward (*A. Henry* !); SHENSI and KANSUH (ex *Maximowicz* in litt.); SZECHUEN (*Faber* !); KWANGTUNG: Lofaushan (*Ford* !); HONGKONG (*Champion*!); COREAN ARCHIPELAGO (*Oldham*, 563!); LUCHU ARCHIPELAGO (*Döderlein* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

Japan.

This well-known climber presents considerable variation in its wide area, and has quite a different aspect when trailing over rocks from what it has when climbing on other shrubs and trees.

1. **Sindechites Henryi,** *Oliver in Hook. Ic. Pl.* t. 1772.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3636 !). Herb. Kew.

87. ASCLEPIADEÆ: PERIPLOCEÆ.

1. **Pentaneura khasiana,** *Kurz*; *Hook. f. Fl. Brit. Ind.* iv. p. 4.

Periploca Khasiana, *Benth. et Hook. f. Gen. Pl.* ii. pp. 740 et 746.

YUNNAN: without locality (*Anderson* !). Herb. Kew.

Khasia hills.

1. **Cryptolepis elegans,** *Wall. Cat.* n. 1639; *G. Don, Gen. Syst.* iv. p. 82; *Hook. f. Fl. Brit. Ind.* iv. p. 6.

Cryptolepis pauciflora, *Wight, Ic. Pl. Ind. Or.* t. 493.

Cryptolepis laxiflora, *Blume, Mus. Bot.* i. p. 147.

Aganosma elegans, *A. DC. Prodr.* viii. p. 433.

Aganosma Edithæ, *Hance in Ann. Sc. Nat.* 5me série, v. p. 227.

Cryptolepis Edithæ, *Maxim. in Mél. Biol.* ix. p. 774.

FORMOSA: Taiwan (*Playfair* !); KWANGTUNG: French Island, Whampoa (*Mrs. Hance*, hb. *Hance*, 10576 !), along the Canton river (*Sampson* !), Lofaushan (*Ford* !). Mus. Brit.; Herb. Kew.

Eastern India and Malaya.

1. **Streptocaulon tomentosum**, *Wight et Arn. Contrib. Ind. Bot.* p. 64; *DC. Prodr.* viii. p. 496; *Wight, Ill. Ind. Bot.* t. 182. f. 2.

CHINA: without locality (ex *DeCandolle*); YUNNAN (*Anderson!*). Herb. Kew.

Malaya and Cochinchina.

1. **Periploca calophylla**, *Falconer in Ann. & Mag. Nat. Hist.* viii. p. 449; *Decne. in DC. Prodr.* viii. p. 498; *Hook. f. Fl. Brit. Ind.* iv. p. 12.

Streptocaulon calophyllum, *Wight, Contrib. Ind. Bot.* p. 65, et *Ill. Ind. Bot.* t. 182. f. 1.

HUPEH: Ichang and immediate neighbourhood (*A. Henry!*). Herb. Kew.

North India, from Kumaon to Khasia.

2. **Periploca sepium**, *Bunge, Enum. Pl. Chin. Bor.* p. 43; *DC. Prodr.* viii. p. 498; *Hance in Journ. Bot.* 1875, p. 134; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474, et *in Mél. Biol.* ix. p. 774.

CHIHLI: neighbourhood of Peking (*Bunge! Bretschneider! Tatarinow! Moellendorff! Hancock!*); SHANTUNG: Chefoo (*Perry!*); KIANGSU: Shanghai (*Carles!*). Mus. Brit.; Herb. Kew.

[*Periploca chinensis*, Spreng. (Syst. Veg. i. p. 836), syn. *Pergularia sinensis*, Lour. (Fl. Cochinch. p. 169), is a name which we have not been able to connect with any plant. Other equally obscure names are *Vallaris sinensis*, G. Don (Gen. Syst. iv. p. 79), referred to *Pergularia sinensis* (DC. Prodr. viii. p. 400), and *Emericia sinensis*, Rœm. et Schult. (Syst. Veg. iv. p. 402). In DeCandolle's Prodromus (viii. p. 499), "*Periploca chinensis*, Spreng.," is referred to *Strophanthus*, and "*Periploca chinensis*, Lour.," to *Pergularia*.]

87. ASCLEPIADEÆ: SECAMONEÆ.

1. **Toxocarpus Wightianus**, *Hook. et Arn. Bot. Beech. Voy.* p. 200; *Decne. in DC. Prodr.* viii. p. 506; *Benth. Fl. Hongk.* p. 224; *Hook. f. Fl. Brit. Ind.* iv. p. 15; *Miq. in Journ. de Bot. Néerl.* i. p. 111; *Henriques in Bol. Soc. Brot.* iii. p. 146.

Schistocodon Meyeni, *Schauer in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 362; *Walp. Rep.* vi. p. 479.

China: without locality (*Millett*! *Cantor*!); Hupeh: Ichang and immediate neighbourhood (*A. Henry*!); Kwangtung: Macao (*Tate*!), Pakhoi (*Playfair*!); Hongkong (*Wright*! *Champion*! *Dickens*!); Hainan: Hoihau (*Hancock*!). Mus. Brit.; Herb. Kew.

Imperfect specimens in the Kew Herbarium from Khasia probably belong to this species. The Ichang specimens have larger leaves than those from the coast-region.

87. ASCLEPIADEÆ: CYNANCHEÆ.

1. **Calotropis gigantea**, *R. Br. in Ait. Hort. Kew.* ed. 2, ii. p. 78; *DC. Prodr.* viii. p. 535; *Hance in Journ. Bot.* 1878, p. 13; *Hook. f. Fl. Brit. Ind.* iv. p. 17; *Wight, Ill. Ind. Bot.* t. 155; *Griff. Ic. Pl. Asiat.* tt. 397 et 398; *Bot. Reg.* t. 58; *Bot. Mag.* t. 6862.

Hainan: on the contiguous small island of Nauchau (*Sampson*!). Mus. Brit.

Throughout India and Malaya, and naturalized in Fernando Po.

[*Asclepias curassavica*, Linn. (Benth. Fl. Hongk. p. 225; Bot. Reg. t. 81), a tropical American weed, is naturalized in South China, as well as in most other warm countries.]

1. **Pycnostelma chinense**, *Bunge in DC. Prodr.* viii. p. 512; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474, et *Mél. Biol.* ix. p. 775; *Franchet, Pl. David.* p. 207, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 234; *Herder in Pl. Radd.* iii. p. 144; *Franch. et Savat. Enum. Pl. Jap.* i. p. 316.

Asclepias paniculata, *Bunge, Enum. Pl. Chin. Bor.* p. 43.

Chihli: near Peking (*Bunge*! *Bushell*! *Bretschneider*!), Pohuashan (*David*, 1951!); Shingking: Talienhwan (*Birnie*!); Hupeh: Ichang, Nanto and mountains to the northward (*A. Henry*!); Corean Archipelago: Port Chusan (*Wilford*, 931!). Mus. Brit.; Herb. Kew.

Dahuria, Mandshuria and Japan, and recently collected by Dr. Watt in Muneypore.

4608 2. **Pycnostelma lateriflorum**, *Hemsl.*, n. sp.

Herba erecta fere undique glabra vel cito glabrescens, caulibus teretibus graciliusculis, internodiis quam folia brevioribus. *Folia*

breviter petiolata, subcoriacea, anguste lanceolata, 2–4 poll. longa, acuta, basi cuneata, venis primariis lateralibus 3–4 inconspicuis. *Flores* purpurei (*Hancock*), circiter 4 lineas diametro, in pseudo-umbellas parvas axillares breviter pedunculatas dispositi, pedicellis gracilibus leviter puberulis 3–5 lineas longis; calyx glaber, alte 5-fidus, intus 10-glandulosus, segmentis ovato-lanceolatis subacutis, corolla dimidio brevioribus; corolla glabra, subrotata, segmentis ovato-lanceolatis acuminatis; coronæ processus 5, ampli, tubo stamineo adnati, carnosi, lateraliter compressi; pollinia pendula; ovarium glabrum; stigma vertice depressum, muticum. *Folliculi* acuminati, læves, glabri, 1½–2 poll. longi; semina longe comosa.

CHIHLI: on sandy banks in and along the river Huuho, very rare (*Hancock*!). Herb. Kew.

This differs from *P. chinense*, Bunge, in the shorter broader leaves and wholly lateral inflorescence.

4388 1. **Holostemma sinense**, *Hemsl.*, n. sp.

Frutex scandens, ramulis floriferis teretibus graciliusculis volubilibus primum unifariam puberulis. *Folia* papyracea vel fere membranacea, graciliter petiolata, profunde cordato-ovata, absque petiolo 3–4 poll. longa, leviter sinuata, abrupte breviterque acuminata, subtus glauca; petiolus pollicaris. *Flores* albi, fragrantes (*Henry*), 6–8 lineas diametro, in cymas parvas paniculiformes pedunculatas quam folia breviores dispositi, breviter pedicellati, pedunculis pedicellis calycibusque puberulis; calycis segmenta ovato-lanceolata vel oblongo-lanceolata vix acuta, corolla dimidio brevior; corollæ subrotatæ lobis latis; corona brevis, distincte 5-lobata; antheræ crustaceæ. *Folliculi* ignoti.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3992, 2755!). Herb. Kew.

The corona of this plant is somewhat intermediate in character between that of *Holostemma* and that of *Graphistemma*, and it is doubtful whether the latter genus should be maintained. Dr. Henry's 2755 is apparently a starved condition.

1. **Graphistemma pictum**, *Benth. et Hook. f. Gen. Pl.* ii. p. 760.

Holostemma pictum, *Champ. in Hook. Kew Journ. Bot.* v. p. 53; *Benth. Fl. Hongk.* p. 224; *Walp. Ann.* v. p. 501.

HONGKONG (*Wright*! *Champion*! *Wilford*! *Urquhart*!). Mus. Brit.; Herb. Kew.

4131 1. **Cynanchum acuminatifolium,** *Hemsl.*

Vincetoxicum acuminatum, *Decne. in DC. Prodr.* viii. p. 524; *Maxim. in Mél. Biol.* ix. p. 786; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 439.

SHINGKING: Peiling (*Webster*!), between Moukden and Tungcheshien (*James*!), Black Bear Valley (*Ross*!). Herb. Kew.

Mandshuria and Japan.

4134 2. **Cynanchum (§ Vincetoxicum) affine,** *Hemsl.*, n. sp.

Frutex vel herba lignescens, volubilis, pubescens, *C. chinensi* affinis, sed differt imprimis cymis pedunculatis. *Folia* petiolata, papyracea, cordato-ovata vel cordato-oblonga, absque petiolo 1–3 poll. longa, acuta, subtus pubescentia, supra glabrescentia; petiolus usque ad 9 lineas longus. *Flores*, ut videtur, lutei, 6–7 lineas diametro, cymoso-umbellati; cymæ graciliter pedunculatæ, sæpius 5-floræ, pedunculis petiolos æquantibus, pedicellis gracillimis quam flores paullo longioribus; calyx minutus, pubescens, lobis anguste ovatis subobtusis; corolla rotata, glabra, longitudinaliter venoso-striata, segmentis ovato-oblongis apice rotundatis; coronæ lobi carnosi, ovati, apice rotundati, gynostegium vix æquantes; pollinia pendula; pistillum glabrum. *Folliculi* ignoti.

KWANGTUNG: without special locality (*Ford*!). Herb. Kew.

Also allied to *C. volubile*, which has larger flowers and the corolla hairy within.

4137 3. **Cynanchum amplexicaule,** *Hemsl.*

Vincetoxicum amplexicaule, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 162; *Maxim. in Mél. Biol.* ix. p. 781; *Hance in Journ. Bot.* 1878, p. 110; *Franch. et Savat. Enum. Pl. Jap.* i. p. 318; *Herder in Pl. Radd.* iv. p. 141; *Debeaux, Fl. Tchef.* p. 96; *Franchet, Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 235.

CHIHLI: Kantai (*Tatarinow* ex *Maximowicz*); SHINGKING: Kaichow to Kinchow (*Ross*!); SHANTUNG: Chefoo (*Perry*! *Carmichael*! *Stuhlmann*!); KIANGSI: Kiukiang (*Shearer*!). Mus. Brit.; Herb. Kew.

Mongolia, Mandshuria, and Japan.

4. **Cynanchum atratum,** *Bunge, Enum. Pl. Chin. Bor.* p. 45.

Vincetoxicum atratum, *Morr. et Decne. in Bull. Acad. Brux.* 1836, p. 17; *DC. Prodr.* viii. p. 523; *Maxim. in Mél. Biol.* ix. p. 789; *Franchet, Pl. David.* p. 208, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 235.

CHIHLI: near Peking (*Bretschneider*!), Jehol (*David* ex *Franchet*); SHINGKING: Peiling near Moukden (*Webster*!), between Moukden and Tungcheshien (*James*!); SHANTUNG (*Fauvel* ex *Franchet*); KWANGTUNG (*Ford*!); COREA: Chemulpo (*Carles*!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

5. **Cynanchum auriculatum,** *Royle in Wight Contrib. Ind. Bot.* p. 58; *Hook. f. Fl. Brit. Ind.* iv. p. 25.

Endotropis auriculata, *Decne. in DC. Prodr.* viii. p. 546.

KIANGSU: Shanghai (*Maingay*! *Carles*! *Bullock*!); CHEKIANG: Ningpo (*Faber*!); FOKIEN: Amoy (*Fortune*, 114!); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 2196, 2481, 2659, 2756, 2845!); SZECHUEN: Mount Omei (*Faber*!); KWANGTUNG (*Ford*, 239!). Mus. Brit.; Herb. Kew.

North India, from Kashmir to Sikkim.

The petals are less hairy in the Chinese specimens than they are in most of the Indian ones, but they otherwise agree.

6. **Cynanchum Bungei,** *Decne. in DC. Prodr.* viii. p. 549; *Maxim. in Mél. Biol.* ix. p. 809; *Hance in Journ. Bot.* 1883, p. 323.

Asclepias hastata, *Bunge, Enum. Pl. Chin. Bor.* p. 43.

Symphyoglossum hastatum, *Turcz. in Bull. Soc. Nat. Mosc.* xxi. (1848), i. p. 255; *Flora*, xxxi. (1848), p. 706; *Walp. Ann.* iii. p. 54.

CHIHLI: near Peking (*Bunge*! *Williams*! *Bretschneider*!). Mus. Brit.; Herb. Kew.

Chinese Turkestan.

7. **Cynanchum caudatum,** *Maxim. in Mél. Biol.* ix. p. 808; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 235.

Endotropis caudata, *Miq.*, *et* E. auriculata, *Miq.* (*non Decne.*), *in Ann. Mus. Bot. Lugd.-Bat.* ii. pp. 127, 128, ex *Maxim.*

SHANTUNG: Chefoo (*Fauvel* ex *Franchet*).

Japan.

8. **Cynanchum chinense,** *R. Br. in Mem. Wern. Soc.* i. p. 44; *Decne. in DC. Prodr.* viii. p. 548.

Cynanchum pubescens, *Bunge, Enum. Pl. Chin. Bor.* p. 44; *DC. Prodr.* viii. p. 548; *Maxim. in Mél. Biol.* ix. p. 802; *Debeaux, Fl. Tchef.* p. 97; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 235, et *Pl. David.* p. 209.

Cynanchum deltoideum, *Hance in Ann. Sc. Nat.* 5me série, v. p. 228, et *in Journ. Bot.* 1878, p. 110.

CHIHLI: near Peking (*Staunton*! *Bunge*! *Bushell*! *Bretschneider*! *Williams*!); SHINGKING: Talienhwan (*Swinhoe*, hb. *Hance*, 6512!), Moukden to Yaloo river (*Webster*!); SHANTUNG: Chefoo (*Forbes*!). Mus. Brit.; Herb. Kew.

4146 **9. Cynanchum** (§ **Vincetoxicum**) **Fordii,** *Hemsl.*, n. sp.

Frutex vel herba lignescens, volubilis, ominno glabra vel glabrescens, caulibus floriferis gracilibus ultimis fere capillaribus teretibus primum bifariam puberulis, internodiis quam folia longioribus. *Folia* longiuscule petiolata, coriacea vel subcarnosa, ovata vel ovato-oblonga, 1–2½ poll. longa, acuta, venis immersis; petiolus gracilis, 3–6 lineas longus. *Flores* nunc albi nunc rubescentes (*Ford*), 3–4 lineas longi, cymoso-umbellati; cymæ sæpius 5–6-floræ, breviter pedunculatæ, foliis multo breviores, pedicellis gracillimis flores vix æquantibus; calyx minutus, extus puberulus, 5-fidus, lobis ovatis acutis; corolla undique glabra, campanulato-rotata, 5–6 lineas diametro, lobis ovato-lanceolatis obtusis; coronæ lobi tenues, lati, rotundati, gynostegium æquantes; pollinia pendula; pistillum glabrum. *Folliculi* sæpe abortu solitarii, coriacei, crassiusculi, acuminati, læves, glabri, circiter 3 poll. longi; semina longe comosa.

KWANGTUNG: Lofaushan, at 800 feet (*Ford*!). Herb. Kew.

In the dried state this closely resembles the Japanese *Vincetoxicum sublanceolatum*, Maxim., which has thinner leaves and much longer acuminate corolla-lobes.

4147 10. **Cynanchum formosanum,** *Hemsl.*

Cynoctonum formosanum, *Maxim. in Mél. Biol.* ix. p. 801; *Hook. f. Fl. Brit. Ind.* iv. p. 23, in nota sub *C. ovalifolio.*

FORMOSA: Tamsui (*Oldham*, 333!), Taiwan (*Playfair*!). Herb. Kew.

Sir Joseph Hooker, *loc. cit.*, suggests that this may be a variety of *C. ovalifolium*, Wight, a native of Malacca, but we prefer keeping them apart. There is also an unnamed Philippine-Island species very near this.

4151 11. **Cynanchum grandifolium,** *Hemsl.*

Vincetoxicum macrophyllum, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 550; *Maxim. in Mél. Biol.* ix. p. 791; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 439; *Engler, Bot. Jahrb.* vi. p. 65.

LUCHU ARCHIPELAGO (*Döderlein* ex *Engler*).

Japan.

4156 12. **Cynanchum insulanum**, *Hemsl.*

Cynoctonum insulanum, *Hance in Journ. Bot.* 1868, p. 330; *Maxim. in Mél. Biol.* ix. p. 800.

HAINAN (*Swinhoe!*). Mus. Brit.; Herb. Kew.

[*Cynanchum inodorum*, Lour. (Fl. Cochinch. p. 166), syn. *Gymnema inodorum*, Decne. (DC. Prodr. viii. p. 551, nomen tantum), is an obscure plant.]

13. **Cynanchum japonicum**, *Hemsl.*

Vincetoxicum japonicum, *Morr. et Decne. in Bull. Acad. Brux.* iii. 1836, p. 172; *DC. Prodr.* viii. p. 524; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 319; *Maxim. in Mél. Biol.* ix. p. 783.

COREAN ARCHIPELAGO (*Oldham*, 565?). Herb. Kew.

Japan.

The Corean plant has short, broad, hardly acuminate follicles, and may belong to a different species.

4162 14. **Cynanchum (§ Vincetoxicum) linearifolium**, *Hemsl.*, n. sp.

Suffrutex vel herba sublignosa, habitu foliisque *C. sibirico* similis, differt tota glabra, foliis longioribus, floribus paucioribus. *Caules* graciles, teretes, glaucescentes, internodiis quam folia multo brevioribus. *Folia* breviter petiolata, papyracea vel subcoriacea, linearia, 2–5 poll. longa, acutissima, adscendentia. *Flores* purpurei, circiter 3 lineas diametro, cymoso-umbellati, cymis 3–6-floris, pedicellis quam flores vix longioribus; calyx glaber, fere 5-partitus, segmentis ovato-lanceolatis vix acutis; corollæ rotatæ lobis ovato-oblongis obtusis intus puberulis; coronæ lobi carnosi, ovati vel obovati, quam gynostegium breviores; pistillum glabrum. *Folliculi* non visi.

KIANGSU: Shanghai (*Faber!*). Herb. Kew.

4164 15. **Cynanchum mandshuricum**, *Hemsl.*

Vincetoxicum mandshuricum, *Hance in Ann. Sc. Nat.* 5me série, v. p. 227; *Maxim. in Mél. Biol.* ix. p. 791.

SHINGKING: Talienhwan (*Swinhoe*, hb. *Hance*, 6538!); SHANTUNG: Chefoo (*Carmichael! Perry! Everard!*). Mus. Brit.; Herb. Kew.

4169 16. **Cynanchum mongolicum**, *Hemsl.*

Vincetoxicum mongolicum, *Maxim. in Mél. Biol.* ix. p. 780, var. ? Hancockianum; *Hance in Journ. Bot.* 1878, p. 110.

SHANSI: Siaowutaishan, at above 10,000 feet altitude (*Hancock*!). Mus. Brit.

4170 17. **Cynanchum Mooreanum**, *Hemsl.*

Vincetoxicum chinense, *S. Moore in Journ. Bot.* 1875, p. 228; *Maxim. in Mél. Biol.* ix. p. 797.

CHEKIANG: Ningpo mountains (*Faber*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1597!). Herb. Kew.

18. **Cynanchum roseum**, *R. Br. in Mem. Wern. Soc.* i. p. 47.

Cynoctonum roseum, *Decne. in DC. Prodr.* viii. p. 532; *Franchet, Pl. David.* p. 209; *Maxim. Prim. Fl. Amur.* pp. 196 et 474, et *in Mél. Biol.* ix. p. 798; *Ledeb. Fl. Ross.* iii. p. 47.

Asclepias purpurea, *Pall.* "*It.* iii. p. 260," ex *Ledeb.*

CHIHLI: near Peking (ex *Maximowicz*), Jehol (*David*, 1756, ex *Franchet*).

Siberia from the Ural eastward, and in Mandshuria.

19. **Cynanchum sibiricum**, *R. Br. in Mem. Wern. Soc.* i. p. 48.

Asclepias sibirica, *Linn.*; *Gmelin, Sib.* iv. p. 77.

Vincetoxicum sibiricum, *Decne. in DC. Prodr.* viii. p. 525; *Ledeb. Fl. Ross.* iii. p. 46; *Maxim. in Mél. Biol.* ix. p. 779; *Baker et Moore in Journ. Linn. Soc.* xvii. p. 384; *Debeaux, Fl. Tchef.* p. 96; *Franchet, Pl. David.* p. 208, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 235.

CHIHLI: near Peking (*Bunge*! *Bushell*! *Bretschneider*!), Jehol (*David*, 1805!); SHINGKING: Moukden (*Webster*!), Talienhwan (*Birnie*!), Chienshan and Hingjing (*Ross*!); SHANTUNG (*Maingay*!). Mus. Brit.; Herb. Kew.

Mongolia and Siberia.

4187 20. **Cynanchum (§ Vincetoxicum) stenophyllum.** *Hemsl.*, n. sp.

Suffrutex vel herba sublignosa, habitu foliisque *C. sibirico* simillima sed sæpius elatior, durior, fere omnino glabra, et flores ex axillis 2–3 superioribus tantum oriundi. *Folia* opposita, conferta, brevissime petiolata, vix coriacea, lineari-lanceolata, adscendentia, venis primariis inconspicue anastomosantibus. *Flores* 1½–2 lineas longi, cymoso-corymbosi vel subumbellati; cymæ quam folia breviores, breviter pedunculatæ, paucifloræ, pedicellis gracilibus; calyx glaber, 5-fidus, lobis ovatis obtusis corolla dimidio brevioribus; corolla subcampanulata, extus glabra, intus parce

pilosula, lobis latis obtusis; corona 5-lobata, lobis latis apice rotundatis gymnostegium vix superantibus; pistillum glabrum. *Folliculi* juveniles tantum visi ut videtur læves.

HUPEH: Ichang (*A. Henry*, 49!); SZECHUEN: Wushan gorge, in sand of river (*Faber*!). Herb. Kew.

21. **Cynanchum versicolor,** *Bunge, Enum. Pl. Chin. Bor.* p. 44.

Vincetoxicum versicolor, *Decne. in DC. Prodr.* viii. p. 524; *Maxim. Prim. Fl. Amur.* p. 474, et *in Mél. Biol.* ix. p. 792; *Debeaux, Fl. Tchef.* p. 95.

CHIHLI: near Peking (*Bretschneider*!); SHANGTUNG: Yantai (ex *Debeaux*). Herb. Kew.

4194 22. **Cynanchum? (§ Vincetoxicum) verticillatum,** *Hemsl.*, n. sp.

Herba glabra vel cito glabrescens, ut videtur caulibus erectis 1–2-pedalibus simplicibus. *Folia* breviter petiolata, papyracea, verticillata (verticillis 6–8-phyllis), lineari-lanceolata, 1½–3½ poll. longa, acuta, venis inconspicuis. *Flores* parvi in cymas parvas axillares dispositi; calyx glaber, fere 5-partitus, segmentis erectis oblongis obtusis. *Folliculi* angusti, acuminati, læves, 2½–3 poll. longi.

SZECHUEN: Changchow and Chungking, among stones on river-side (*Faber*!). Herb. Kew.

In the absence of flowers, the genus of this very distinct plant remains a little uncertain.

4195 23. **Cynanchum volubile,** *Hemsl.*

Vincetoxicum volubile, *Maxim. Prim. Fl. Amur.* p. 195, et *in Mél. Biol.* ix. p. 795.

Asclepiadea dubia, *Oliv. in Journ. Linn. Soc.* ix. p. 166.

COREAN ARCHIPELAGO: Long Reach (*Oldham*, 569!). Herb. Kew.

Mandshuria.

24. **Cynanchum Wilfordi,** *Franch. et Savat. Enum. Pl. Jap.* ii. p. 445.

Cynoctonum Wilfordi, *Maxim. in Mél. Biol.* ix. p. 799; *Hook. f. Fl. Brit. Ind.* iv. p. 25, in nota sub *Cynancho auriculato*.

Endotropis auriculata, *Franch. et Savat. Enum. Pl. Jap.* i. p. 319, non *Decne.* nec *Miq.*

COREA: small islet on the south-east coast (*Perry* !); COREAN ARCHIPELAGO: Port Chusan (*Wilford*, 922 !), Port Chusan and Tracey Island (*Oldham*, 568 !). Mus. Brit.; Herb. Kew.

Japan.

Sir Joseph Hooker, *loc. sup. cit.*, confuses this with *Cynanchum caudatum*, Miq., and *C. Bungei*, Decne. (*Symphyoglossum hastatum*, Turcz.), which are different from each other, and are readily distinguished from *C. Wilfordi* by their larger, strongly reflexed petals.

4558 1. **Pentatropis officinalis**, *Hemsl.*, n. sp.

Herba? volubilis, tota glabra vel citissimo glabrescens, ramulis gracillimis teretibus, obscurissime unifariam puberulis. *Folia* longe graciliterque petiolata, papyracea, cordato-ovata vel fere hastata, sinu aperto, absque petiolo usque ad 3 poll. longa, acutissima, leviter undulata, subtus pallidiora, venis primariis lateralibus paucis inter se anastomosantibus; petiolus fere filiformis ½–2 poll. longus. *Flores* albi (*Henry*), 4–8 lineas diametro, subumbellati; umbellæ 2 tantum visæ circiter 6-floræ, petiolos vix æquantes, pedunculo pedicellisque leviter puberulis; calyx 5-partitus, segmentis ovato-oblongis obtusis ciliolatis corolla dimidio brevicribus; corolla rotata, segmentis ovato-oblongis obtusis intus pubescentibus; coronæ simplicis squamæ 5, amplæ, ut videtur carnosæ vel inflatæ, apice liberæ, furcatæ, tubo stamineo verticaliter adnatæ; pollinia in quoque loculo solitaria pendula. *Folliculi* non visi.

HUPEH: Patung district, cultivated (*A. Henry*, 4814 !). Herb. Kew.

The coronal structure of this plant is almost exactly like that of *Pentatropis spiralis*, Decne., as figured in the 'Annales des Sciences Naturelles,' 2^me^ série, ix. p. 327, t. 11. fig. E.

The root, Dr. Henry states, is employed as a drug.

1. **Metaplexis Stauntoni**, *Roem. et Schult. Syst. Veg.* vi. p. 111; *Maxim. Prim. Fl. Amur.* p. 196; *Franch. et Savat. Enum. Pl. Jap.* i. p. 316; *Franchet, Pl. David.* p. 207, *et Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 234; *Maxim. in Mél. Biol.* ix. p. 810.

Metaplexis chinensis, *Decne. in DC. Prodr.* viii. p. 611; *Debeaux, Fl. Tchef.* p. 95.

Urostelma chinense, *Bunge, Enum. Pl. Chin. Bor.* p. 44.

Pergularia japonica, *Thunb. Fl. Jap.* p. 111.

Metaplexis rostrata, *Turcz. in Bull. Soc. Nat. Mosc.* xxi. 1, p. 253; *Walp. Ann.* iii. p. 49.

CHIHLI: near Peking (*Staunton*! *Bretschneider*!), Jehol, in the midst of the mountains (*David*, 2019!); SHINGKING: Moukden (*Webster*!); SHANGTUNG: Chefoo (ex *Debeaux*); KIANGSU: Shanghai (*Faber*! *Maingay*!); FOKIEN: Amoy (*Fortune*, 87!); COREA (ex *Maximowicz*!). Mus. Brit.; Herb. Kew.

Japan and Mandshuria.

HENRYA, *Hemsl.* (Cynanchearum genus novum.)

Calyx minutus, herbaceus, alte 5-fidus, intus eglandulosus, lobis ovatis obtusis. *Corolla* subrotata, alte 5-fida, lobis ovali-rotundatis longitudinaliter venosis, dextrorsum obtegentibus. *Corona* nulla. *Stamina* basi corollæ affixa, filamentis in tubum brevissimum connatis. *Pollinia* minutissima in quoque loculo solitaria, oblique descendentia. *Stigma* vertice umbonatum. *Folliculi* ignoti.—*Frutex* (vel herba) volubilis gracillimus, undique glaberrimus, foliis oppositis membranaceis, floribus parvis laxe cymoso-paniculatis.

10668 1. **Henrya Augustiniana**, *Hemsl.*, n. sp.

Folia breviter petiolata, cordato-ovata vel cordato-lanceolata, cum petiolo usque ad 5 poll. longa, acutissima, subtus pallidiora, venis lateralibus primariis utrinque 4–5 inter se anastomosantibus. *Flores* lutei (*Henry*), circiter 3 lineas diametro, in cymas laxas dichotomo-ramosas axillares dispositi, cymarum ramulis gracillimis, pedicellis capillaribus.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 4252!). Herb. Kew.

This genus is named after the discoverer, Dr. Augustine Henry; and it may also serve to commemorate the Rev. B. C. Henry, a friend and correspondent of the late Dr. Hance, and a collector of plants who has discovered many novelties in the south of China. In habit and inflorescence this plant resembles some of the slender small-flowered species of *Tylophora*, such as *T. exilis*, Colebr., having a loosely branched inflorescence, but the minute pollinia are of the pendulous type, and this, connected with absence of a corona, seems sufficiently distinctive to justify the foundation of a new genus—that is to say, as the genera are now constituted, for it is doubtful whether the characters derived from the corona and the direction of the pollinia should in all cases decide the position of a plant in a classification. On this point, however, we must defer to botanists who have examined a very much larger number of members of this natural order.

The Acanthaceous genus *Henrya*, of Nees, has been reduced to *Tetramerium*, and apparently on good grounds.

87. ASCLEPIADEÆ: MARSDENIEÆ.

1. **Pentasachme Championi,** *Benth. in Hook. Kew Journ. Bot.* v. p. 54; *Walp. Ann.* v. p. 504; *Benth. Fl. Hongk.* p. 228 (Pentasacme); *Maxim. in Mél. Biol.* ix. p. 811.

HONGKONG (*Wright*! *Wilford*! *Hance*! *Champion*!). Mus. Brit.; Herb. Kew.

This is very near *P. caudatum*, Wall., a native of Assam, Khasia, and Pegu.

2. **Pentasachme glaucescens,** *Decne. in DC. Prodr.* viii. p. 627.

CHINA: without locality (*Staunton* ex *Decaisne*).

3. **Pentasachme Stauntoni,** *Decne. in DC. Prodr.* viii. p. 627.

CHINA: without locality (*Staunton* ex *Decaisne*).

The genus of this and of *P. glaucescens*, Decne., is doubtful, as the flowers were unknown.

1. **Gymnema affine,** *Decne. in DC. Prodr.* viii. p. 622; *Benth. Fl. Hongk.* p. 227; *Maxim. in Mél. Biol.* ix. p. 811.

Gymnema sylvestre, var. chinense, *Benth. in Hook. Kew Journ. Bot.* v. p. 54.

CHINA: without locality (*Millett*!); FOKIEN: Amoy interior (*Swinhoe*!); FORMOSA: Tamsui (*Oldham*, 330!), Takow (*Playfair*!); KWANGTUNG: Macao (*Hance*! *Callery*! *Tate*!), Pakhoi (*Playfair*!); HONGKONG (*Champion*! *Wright*!). Mus. Brit.; Herb. Kew.

2. **Gymnema tingens,** *Wight et Arn. Contrib. Ind. Bot.* p. 45; *Wight, Ic. Pl. Ind. Or.* t. 593 (var. cordifolia); *Hook. f. Fl. Brit. Ind.* iv. p. 31.

Bidaria tingens, *Decne. in DC. Prodr.* viii. p. 623, partim.

Asclepias tingens, *Buch. in Roxb. Fl. Ind.* ii. p. 53.

KWANGSI (*Wenyon*!). Herb. Kew.

Widely spread in tropical India, including the Deccan peninsula, also in Burma, and perhaps the Philippine Islands.

[*Gongronema Finlaysonii*, Decne. (DC. Prodr. viii. p. 625), syn. *Gymnema Finlaysonii*, Wight (Contrib. Ind. Bot. p. 46), recorded as from China or Singapore, is most likely from Siam. See Hook. f. Fl. Brit. Ind. iv. p. 34.]

1. **Tylophora hispida**, *Decne. in DC. Prodr.* viii. p. 610; *Benth. Fl. Hongk.* p. 225; *Maxim. in Mél. Biol.* ix. p. 813.

Diplolepis apiculata, *Lindl. in Trans. Hort. Soc. Lond.* vi. p. 68.

CHINA: without locality (*Potts*! *Millett*!); FORMOSA (*Oldham*, 326!); HONGKONG (*Wright*! *Champion*! *Wilford*!). Mus. Brit.; Herb. Kew.

2. **Tylophora**, sp., *an var.* T. asthmaticæ?, *Wight et Arn. Contrib. Ind. Bot.* p. 51; *Hook. f. Fl. Brit. Ind.* iv. p. 45; *Wight, Ic. Pl. Ind. Or.* t. 1277; *Benth. et Trim. Med. Pl.* t. 177.

Cynanchum viridiflorum, *Sims, Bot. Mag.* t. 1929.

HAINAN (*Swinhoe*!). Herb. Kew.

Widely spread in Eastern India and Malaya.

3. **Tylophora**, sp., *aff.* T. japonicæ, *Miq.*

SOUTH-WEST FORMOSA (*Swinhoe*!). Herb. Kew.

There are so many closely allied species of this genus that it is difficult to determine incomplete specimens.

1. **Marsdenia lachnostoma**, *Benth. Fl. Hongk.* p. 226; *Maxim. in Mél. Biol.* ix. p. 818.

HONGKONG (*Wright*!). Herb. Kew.

The only specimen of this in the Kew Herbarium bears the name *M. eriostoma* in the handwriting of the late Mr. Bentham.

4516 2. **Marsdenia sinensis**, *Hemsl.*, n. sp.

M. tomentosæ valde affinis, differt foliis late ovato-cordatis subtus dense molliterque tomentosis, floribus majoribus corollæ lobis patento-recurvis, concavo-convexis.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*!). Herb. Kew.

The specimens of the Japanese *M. tomentosa*, Morr. & Decne., that we have had an opportunity of examining are nearly glabrous, except the pedicels and calyces, and the name would be much more appropriate for the present plant, which otherwise differs in the characters indicated.

3. **Marsdenia tinctoria**, *R. Br. in Mem. Wern. Soc.* i. p. 30; *DC. Prodr.* viii. p. 615; *Benth. Fl. Hongk.* p. 226; *Maxim. in Mél. Biol.* ix. p. 818; *Hook. f. Fl. Brit. Ind.* iv. p. 34; *Wight, Ic. Pl. Ind. Or.* t. 589; *Griff. Ic. Pl. Asiat.* t. 389.

FORMOSA: Tamsui (*Oldham*, 325!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3282!); HONGKONG (*Wilford*! *Champion*!). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya.

4. **Marsdenia urceolata**, *Decne. in DC. Prodr.* viii. p. 617; *Hance in Journ. Bot.* 1878, p. 229.

HAINAN: Hoihau (*Bullock*, hb. *Hance*!). Mus. Brit.

Cochinchina.

1. **Stephanotis** (§ **Jasminanthes**) **chinensis**, *Champ. in Hook. Kew Journ. Bot.* v. p. 53; *Walp. Ann.* v. p. 503; *Benth. Fl. Hongk.* p. 227; *Maxim. in Mél. Biol.* ix. p. 818.

KWANGTUNG: Lantao (*Ford*!); HONGKONG (*Wilford*! *Champion*!). Mus. Brit.; Herb. Kew.

1. **Pergularia odoratissima**, *Smith, Ic. Pict. Pl. Rar.* t. 16; *R. Br. in Mem. Wern. Soc.* i. p. 31; *Decne. in DC. Prodr.* viii. p. 618; *Maxim. in Mél. Biol.* ix. p. 819; *Hook. f. Fl. Brit. Ind.* iv. p. 38; *Bot. Reg.* t. 412; *Andrews, Bot. Rep.* t. 185.

Cynanchum odoratissimum, *Lour. Fl. Cochinch.* p. 166.

CHINA: cultivated (*Bretschneider*! *Hance*! and others). Mus. Brit.; Herb. Kew.

All the numerous specimens in the Kew Herbarium bearing the name *Pergularia odoratissima* have been referred, so far as the 'Flora of British India' is concerned, to *P. minor*, Andrews (Bot. Rep. t. 184), and *P. pallida*, Wight et Arn. (Wight, Ic. Pl. Ind. Or. t. 585), and there is little doubt that the last named is the same as *P. odoratissima*. On the other hand, different as the drawings are of *P. minor* and *P. odoratissima*, it is difficult to distinguish herbarium specimens.

4254 1. **Dregea sinensis**, *Hemsl.*, n. sp.

Frutex scandens vel vagans, ramulis ultimis crassiusculis tomentosis. *Folia* longe petiolata, papyracea, ovato-cordata vel rotundato-cordata, absque petiolo 2–4 poll. longa, acuta, sæpe acuminata, basi sinu late aperto, supra puberula demum fere glabra, subtus brevissime denseque tomentosa; petiolus teres, tomentosus, ½–2 poll. longus. *Flores* 6–8 lineas diametro, in cymas amplas umbelliformes longe pedunculatas dispositi, pedicellis gracilibus puberulis, 8–12 lineas longis; calycis segmenta ovato-oblonga, lineam circiter longa, obtusissima, pubescentia; corolla rotata, lobis ovatis obtusissimis ciliolatis; coronæ squamæ ovoideæ, acuminatæ; ovarium glabrum. *Folliculi* tenues, puberuli, angusti, divaricati, arcuati, 2–2½ poll. longi, sursum valde attenuati, apice hamati, longitudinaliter obscure sinuato-striati; semina valde compressa, obovato-oblonga, longe comosa.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 1767, 3005, 3125, 3554, 3868!); SZECHUEN: Kueichou (*Faber*!). Herb. Kew.

Easily distinguished from *D. volubilis* by the pubescence and very different follicles.

2. **Dregea volubilis**, *Benth. et Hook. f. Gen. Pl.* ii. p. 775; *Fl. Brit. Ind.* iv. p. 46.

Hoya viridiflora, *R. Br. in Mem. Wern. Soc.* i. p. 27; *Wight, Contrib. Ind. Bot.* p. 39, et *in Hook. Bot. Miscel.* ii. p. 98, t. 1; *Wight, Ic. Pl. Ind. Or.* t. 586; *Jacquem. Voy. Bot.* t. 114; *Griff. Ic. Pl. Asiat.* tt. 387, 388.

Asclepias volubilis, *Linn. f.*; *Roxb. Fl. Ind.* ii. p. 36.

Apocynum tiliæfolium, *Lam. Encycl.* i. p. 214.

Wattakaka viridiflora, *Hassk. in Flora*, 1857, p. 99; *Rheede, Hort. Malab.* ix. t. 15.

Tylophora macrantha, *Hance in Journ. Bot.* 1882, p. 79.

HONGKONG: Little Hongkong (*Ford*!). Mus. Brit.; Herb. Kew.

Widely spread in Eastern and Southern India and extending to Ceylon and Java.

[*Hybanthera cordifolia*, Link, Klotzsch et Otto (Ic. Pl. Rar. Hort. Bot. Berol. p. 109, t. 44), syn. *Echites sinensis*, Hort. Angl., is a plant closely allied to the above, but nothing is known of its history beyond what is in the latter name.]

1. **Hoya carnosa**, *R. Br. in Mem. Wern. Soc.* i. p. 27; *Decne.*

in DC. Prodr. viii. p. 636; *Traill in Trans. Hort. Soc. Lond.* vii. p. 19; *Benth. Fl. Hongk.* p. 228; *Maxim. in Mél. Biol.* ix. p. 819; *Reichb. Ic. et Descr. Pl. Cult.* t. 32; *Herb. Gen. de l'Amat.* iii. t. 200; *Engler, Bot. Jahrb.* vi. p. 65.

Asclepias carnosa, *Linn. Suppl.* p. 170; *Bot. Mag.* t. 788; *Smith, Exot. Bot.* ii. p. 21, t. 70.

Stapelia chinensis, *Lour. Fl. Cochinch.* p. 165.

Schollia crassifolia, *Jacq. Eclog.* i. p. 5, t. 2.

Hoya crassifolia, *Haw. Suppl. Pl. Succ.* p. 8.

Hoya laurifolia, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 129.

Hoya Motoskei, *Teysm. et Binnend. in Tuinbouw Flora,* i. p. 65, t. 4.

Hoya rotundifolia, *Sieb. Cat. Pl. Jap.* 1840, et *in Tuinbouw Fl.* i. p. 71, ex *Maxim. loc. cit.*

Hoya variegata, *Sieb.* ex *Morren in Ann. Gand,* ii. p. 401, t. 90; *Flore des Serres,* viii. p. 241, t. 838.

Hoya picta, *Rev. Hort.* 1853, p. 277 (varietates argentea *et* aurea).

Hoya chinensis, *Traill in Trans. Hort. Soc. Lond.* vii. p. 27.

CHINA: without locality (*Millett*!); FORMOSA: Kelung (*Oldham*, 331!); HONGKONG (*Champion*! *Urquhart*!). Mus. Brit.; Herb. Kew.

Cultivated in India, Java, and elsewhere.

2. **Hoya Pottsii,** *Traill in Trans. Hort. Soc. Lond.* vii. p. 25, t. 1; *DC. Prodr.* viii. p. 638; *Maxim. in Mél. Biol.* ix. p. 822; *Lodd. Bot. Cab.* t. 1969; *Bot. Mag.* t. 3425.

Hoya trinervis, *Traill in Trans. Hort. Soc. Lond.* vii. p. 26?

KWANGTUNG: Macao (*Potts* ex *Traill*).

We have seen no specimens of this, either wild or cultivated; but the conspicuously three-nerved leaves, as represented in the figures cited, at once distinguish it from *H. carnosa*, R. Br.

[The name *Hoya angustifolia*, Traill (Trans. Hort. Soc. Lond. vii. p. 29), was proposed for a cultivated plant, of Chinese origin, the flowers of which were unknown.]

1. **Dischidia chinensis,** *Champ. in Hook. Kew Journ. Bot.* v. p. 55; *Benth. Fl. Hongk.* p. 228; *Maxim. in Mél. Biol.* ix. p. 823.

HONGKONG (*Champion*! *Wright*!). Mus. Brit.; Herb. Kew.

2. **Dischidia formosana,** *Maxim. in Mél. Biol.* ix. p. 822.

FORMOSA (*Oldham*, 332!). Mus. Brit.; Herb. Kew.

87. ASCLEPIADEÆ: CEROPEGIEÆ.

1. **Ceropegia trichantha,** *Hemsl. in Journ. Bot.* 1885, p. 286.

KWANGTUNG: Cape d'Aguilar (*Ford*!). Mus. Brit.; Herb. Kew.

88. LOGANIACEÆ.

1. **Gelsemium elegans,** *Benth. in Journ. Linn. Soc.* i. p. 90, et *Fl. Hongk.* p. 229; *Miq. Fl. Ind. Bat.* ii. p. 359.

Medicia elegans, *Gardn. in Hook. Kew Journ. Bot.* i. p. 325.

Leptopteris sumatrana, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 240, t. 34.

FOKIEN: Amoy interior (*Swinhoe*!); YUNNAN: Poneshee (*Anderson*!); KWANGTUNG (*Ford*! *Hance*!); HONGKONG (*Wilford*! *Champion*! *Wright*!). Mus. Brit.; Herb. Kew.

Eastern India, Burma, and Sumatra.

1. **Mitreola pedicellata,** *Benth. in Journ. Linn. Soc.* i. p. 91; *Hook. f. Fl. Brit. Ind.* iv. p. 79.

Parophiorrhiza khasiana, *Clarke in Hook. f. Fl. Brit. Ind.* iii. p. 85.

HUPEH: Ichang and neighbourhood (*A. Henry*!); SZECHUEN: Chung City (*Faber*!). Herb. Kew.

Eastern India.

1. **Mitrasacme alsinoides,** *R. Br. Prodr. Fl. Austral.* p. 453; *A. DC. Prodr.* ix. p. 11; *Benth. Fl. Austral.* p. 353; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 80.

Mitrasacme indica, *Wight, Ic. Pl. Ind. Or.* t. 1601; *Hance in Journ. Bot.* 1878, p. 13, et 1885, p. 325.

SHANTUNG: Chefoo (hb. *Forbes*!); FOKIEN: Amoy (*Hance*!); KWANGTUNG: Swatow (*Sampson*, hb. *Hance*!); COREA: Chemulpo (*Carles*!). Mus. Brit.; Herb. Kew.

Widely dispersed in India, the Malayan Archipelago, and extending to Eastern Australia.

2. **Mitrasacme nudicaulis,** *Reinw. in Blume Bijdr.* p. 849; *A. DC. Prodr.* ix. p. 12; *Benth. in Journ. Linn. Soc.* i. p. 92; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 80; *Benth. Fl. Hongk.* p. 230.

Mitrasacme chinensis, *Griseb. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 51

HONGKONG (*Wright*!); KWANGTUNG (*Meyen*, ex *Grisebach*).

Eastern India and Malaya, and perhaps also in North Australia.

3. **Mitrasacme polymorpha,** *R. Br. Prodr. Fl. Austral.* p. 452; *A. DC. Prodr.* ix. p. 10; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 80.

Mitrasacme capillaris, *Wall.*; *Benth. in Journ. Linn. Soc.* i. p. 92, et *Fl. Hongk.* p. 230.

Mitrasacme malaccensis, *Wight, Ic. Pl. Ind. Or.* t. 1601.

HONGKONG (*Champion*! *Wilford*! *Hinds*!). Herb. Kew.

India, Malaya, Australia, and Japan.

1068 Var.? **grandiflora,** *Hemsl.*; fere omnino glabra, floribus majoribus.

KWANGTUNG: Pakhoi (*Playfair*!). Mus. Brit.; Herb. Kew.

We have followed Mr. Clarke (Hook. f. Fl. Brit. Ind. iv. p. 80) in reducing *M. capillaris*, Wall., to *M. polymorpha*; though we do not feel quite satisfied that all the forms referred here belong to one species.

1185 1. **Buddleia albiflora,** *Hemsl.*, n. sp.

Arbor 20–30-pedalis (*Henry*), ramulis ultimis floriferis teretibus rectis crassiusculis cito glabrescentibus, internodiis quam folia brevioribus. *Folia* distincte petiolata, papyracea, lanceolata, 5–9 poll. longa, longe acuteque acuminata, basi cuneata, grosse duplicato-serrata, discoloria, supra glabrescentia, subtus albida vel flavida, plus minusve tomentosa. *Flores* albi (*Henry*), circiter 3 lineas longi, extus glabri vel cito glabrescentes, distincte pedicellati vel centrales subsessiles, dense cymoso-paniculati, paniculis terminalibus usque ad 9 poll. longis, pedicellis hirsutis; calyx cupulatus, 1 lin. longus, 5-dentatus, dentibus angustis vix acutis, sinubus latis rotundatis; corolla cylindrica, recta, crassa, intus barbata, lobis rotundatis obscure erosis; antheræ juxta apicem tubi subsessiles; ovarium oblongum, glabrum, stylo clavato incluso. *Capsula* ignota.

HUPEH: Patung district (*A. Henry*, 156 A, 1871, 2515, 4689!). Herb. Kew.

A very distinct species, remarkable in China for its large stature and small, cymosely-paniculate, white flowers.

2. **Buddleia alternifolia,** *Maxim. in Mél. Biol.* x. p. 673.

KANSUH: on the southern side of the Hoangho (*Piasezki* ex *Maximowicz*); SHENSI or KANSUH: on the Tsunglin range (ex *Maximowicz* in litt.).

3. **Buddleia asiatica,** *Lour. Fl. Cochinch.* p. 72; *Benth. in DC. Prodr.* x. p. 446, et *Fl. Hongk.* p. 231; *Hance in Journ. Linn. Soc.* xiii. p. 112; *Maxim. in Mél. Biol.* x. p. 674; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 82; *Bot. Mag.* t. 6323.

Buddleia discolor, *Ham.*; *Wight, Illustr. Ind. Bot.* t. 165, *b. v.*, et *Ic. Pl. Ind. Or.* t. 894.

Buddleia Neemda, *Ham.*; *Roxb. Fl. Ind. ed. Carey et Wall.* i. p. 411; *Hance in Journ. Linn. Soc.* xiii. p. 112.

SOUTH-WEST CHINA (*Bourne*!); FORMOSA: Tamsui (*Oldham*, 318!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3285, 3456!); SZECHUEN: Min river (*Faber*!); KWANGTUNG: Wongyu (*Tate*!), Lofaushan (*Ford*!); HONGKONG (*Wright*! *Champion*! *Urquhart*!). Mus. Brit.; Herb. Kew.

Throughout India, and extending to Malaya and Cochinchina.

4. **Buddleia curviflora,** *Hook. et Arn. Bot. Beech. Voy.* p. 267; *Benth. in DC. Prodr.* x. p. 445, non alior.*

LUCHU ARCHIPELAGO (*Beechey*!). Herb. Kew.

5. **Buddleia Lindleyana,** *Fortune in Bot. Reg.* 1844, *Miscel.* p. 25; *Benth in DC. Prodr.* x. p. 446; *Bot. Reg.* 1846, t. 4; *Maxim. in Mél. Biol.* x. p. 674; *S. Moore in Journ. Bot.* 1878, p. 138; *Benth. Fl. Hongk.* p. 231; *Franchet, Pl. David.* p. 210.

Buddleia intermedia, *Carr. Rev. Hort.* 1873, p. 151, cum tab. color., ex *Maxim. loc. cit.*

CHEKIANG: Chusan (*Fortune*, 29, 32, and 37!), Ningpo

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* The plant cultivated in gardens as *Buddleia curviflora* is a native of Japan, and differs from the typical plant of Hooker and Arnott in having strongly 4-winged branches, a relatively much larger calyx, and a shorter, less slender corolla. (See Illustr. Hort. xvii. 1870, p. 133, t. 25; Rev. Hort. 1870–71, p. 337, cum fig. xylogr.; Maxim. in Mél. Biol. x. p. 674.) This species may be named *Buddleia japonica*, Hemsl.

(*Everard*!); Kiangsi: Kiukiang (*Shearer*!); Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 4190!); Kwangtung: North river (*Sampson*, hb. *Hance*, 321!). Mus. Brit.; Herb. Kew.

Japan, collected by Mr. Maries on Fudsiyama.

We have failed to find the Hongkong specimen recorded by Bentham from Victoria Peak, collected by Eyre.

Var. **sinuatodentata**, *Hemsl.*; foliis grosse sinuato-dentatis longe acuminatis.

Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 624, 3979!). Herb. Kew.

6. **Buddleia officinalis**, *Maxim. in Mél. Biol.* x. p. 675.

Buddleia madagascariensis, *Hance in Journ. Bot.* 1882, p. 37, non *Lamk.*

Shensi and Kansuh (ex *Maximowicz*); Hupeh: Ichang (*Watters*, hb. *Hance*), Ichang gorge (*Maries*!), Ichang, Patung and immediate neighbourhood (*A. Henry*, 1117, 1291, 1447, 1527, 3110, 3363!); Szechuen: Kueichou (*Faber*!). Mus. Brit.; Herb. Kew.

7. **Buddleia paniculata**, *Wall.*; *Roxb. Fl. Ind. ed. Carey et Wall.* i. p. 412; *Benth. in DC. Prodr.* x. p. 444; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 81; *Franchet, Pl. David.* p. 209.

Buddleia crispa, *Benth. in DC. Prodr.* x. p. 444; *Bot. Mag.* t. 4793.

Southern Shensi (*David* ex *Franchet*).

Afghanistan to Burma.

It is possible that the Chinese specimens referred here may be the same as *B. officinalis*, Maxim.

8. **Buddleia variabilis**, *Hemsl.*, n. sp.

Frutex magnitudine, indumento atque forma foliorum pervarius, ramulis floriferis primum plus minusve tomentosis obscure 4-alatis, 4-angulatis vel fere vere teretibus. *Folia* brevissime petiolata vel sessilia, linea elevata vel auriculata conjuncta (auriculis interdum amplis), papyracea, anguste lanceolato-oblonga vel ovato-lanceolata, 2–12 poll. longa, subobtusa vel acuta, interdum longe acuminata, integra, minute calloso-dentata, crenato-dentata, interdum grosse crenata vel grosse serrata, discoloria, supra glabra vel cito glabrescens, venis interdum conspicuis, subtus plus minusve incano- vel fulvo-tomentosa. *Flores* rosei, intus aurantiaci (*Henry*), 5–6 lineas longi, dense (sæpe densis-

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Vol. XXV., Nos. 165–169.
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(Nos. 171–172 will complete the Volume.)
Vol. XXVI., No. 173, the present Number.
(Nos. 174–180 are reserved for the continuation of the 'Index Floræ Sinensis.')

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This consists of nine Fellows (three of whom retire annually) and of the four officers *ex officio*, in all thirteen members. The former are elected annually by the Council in June, and serve till the succeeding Anniversary. The Committee meet at 4 P.M., at intervals during the Session. The Members for 1889–90, in addition to the officers, are:—

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NOTE.—The Charter and Bye-Laws of the Society, as amended to the 21st April, 1881, have been reprinted, and may be had on application.

sime) cymosi, cymis in paniculas angustas terminales thyrsoideas dispositis, pedicellis hirsutis; calyx glaber, glabrescens vel hirsutus, brevis, dentibus ovatis vel oblongis obtusis; corolla glabra vel citissimo glabrescens, tubo cylindrico recto gracili intus parcissime barbato, lobis latis rotundatis eroso-dentatis; antheræ medio tubi subsessiles; ovarium glabrum, stylo clavato stamina æquante. *Capsula* glabra, lævis, angusta, clavata, 4–5 lineas longa; semina fusiformia.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 156, 1069, 2060, 2351, 2668, 3110 A, 3110 B!); SZECHUEN: Mount Omei at 6000 feet (*Faber*!). Herb. Kew.

The extreme forms here treated as one species are very different in foliage; but they are connected by every intermediate gradation.

[*Cyrtophyllum fragrans*, DC. (Prodr. ix. p. 31), syn. *C. peregrinum*, Blume, and *Fagræa fragrans*, Roxb., is recorded, probably erroneously, as Chinese.]

1. **Strychnos angustiflora,** *Benth. in Journ. Linn. Soc.* i. p. 102; *Benth. Fl. Hongk.* p. 232.

Strychnos Colubrina, var.?, *Benth. in Hook. Kew Journ. Bot.* v. p. 56.

HONGKONG (*Champion*! *Wright*! *Wilford*! *Urquhart*!). Mus. Brit.; Herb. Kew.

2. **Strychnos paniculata,** *Champ. in Hook. Kew Journ. Bot.* v. p. 56; *Walp. Ann.* v. p. 508; *Benth. Fl. Hongk.* p. 232.

KWANGTUNG: Canton (*Reeves*!); HONGKONG (*Champion*! *Wright*! *Wilford*!). Mus. Brit.; Herb. Kew.

1. **Gærtnera hongkongensis,** *Seem. Bot. Voy. 'Herald,'* p. 384; *Benth. Fl. Hongk.* p. 232.

Leuconotis sp., *Benth. in Hook. Kew Journ. Bot.* iv. p. 333.

HONGKONG (*Eyre*! *Champion*!). Herb. Kew.

1. **Gardneria nutans,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 561; *Walp. Ann.* i. p. 512; *Franch. et Savat. Enum. Pl. Jap.* i. p. 321.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3350!). Herb. Kew.

Japan.

89. GENTIANACEÆ.

1. **Exacum tetragonum,** *Roxb. Fl. Ind.* i. p. 413; *DC. Prodr.* ix. p. 44; *Benth. Fl. Hongk.* p. 233; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 95; *Wall. Pl. As. Rar.* t. 276; *Bot. Mag.* t. 4340.

Exacum bellum, *Hance in Hook. Lond. Journ. Bot.* vii. p. 472; *Walp. Ann.* iii. p. 77.

KWANGTUNG: Yingtak (*Sampson,* hb. *Hance,* 505!); HONGKONG (*Champion*! *Urquhart*! *Wilford*!). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya, extending to the Philippine Islands.

1. **Erythræa japonica,** *Maxim. in Mél. Biol.* xii. p. 494.

LUCHU ARCHIPELAGO (*Tashiro* ex *Maximowicz*).

Japan.

2. **Erythræa ramosissima,** *Pers. Syn. Pl.* i. p. 283 (var. altaica); *Griseb. in DC. Prodr.* ix. p. 57; *Franchet, Pl. David.* p. 210; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 101.

Erythræa pulchella, *Hance in Journ. Linn. Soc.* xiii. p. 93, *an Fries*?

CHIHLI: Jehol (*David,* 1974!). Mus. Brit.; Herb. Kew.

From Egypt and Western Asia to North India and Mandshuria.

3. **Erythræa spicata,** *Pers. Syn. Pl.* i. p. 283; *DC. Prodr.* ix. p. 60; *Boiss. Fl. Or.* iv. p. 69; *Sibth. Fl. Græca,* t. 238.

FORMOSA: Kelung, in paddy-fields (*Ford*!). Herb. Kew.

Portugal, Spain, and North Africa eastward to Soongaria.

Probably a colonist in Formosa.

1. **Crawfurdia fasciculata,** *Wall. Tent. Fl. Nep.* p. 63, t. 47; *DC. Prodr.* ix. p. 120; *D. Don in Trans. Linn. Soc.* xvii. p. 518; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 107; *S. Moore in Journ. Bot.* 1875, p. 231; *Bot. Mag.* t. 4838.

Gentiana volubilis, *D. Don, Prodr. Fl. Nep.* p. 126.

Crawfurdia japonica, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 546; *Franch. et Savat. Enum. Pl. Jap.* i. p. 324; *Maxim. in Mél. Biol.* ix. p. 399; *S. Moore in Journ. Bot.* 1880, p. 4.

Golowninia japonica, *Maxim. in Bull. Acad. Imp. Sc. Pétersb.* iv. p. 251, cum tab.

CHEKIANG: Ningpo (*Carles*!); KIANGSI: Kiukiang (*Shearer*!);

FORMOSA (*Steere* !); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry* !); SZECHUEN: Mount Omei at 4000 to 4500 feet (*Faber* !). Mus. Brit.; Herb. Kew.

Mountains of Northern and Eastern India to Japan.

This species should perhaps include *C. affinis*, Wall., *C. luteo-viridis*, Clarke, and the Javanese *Tripterospermum trinerve*, Blume. It is extremely variable in the number and size of the flowers and the relative length of the calyx-teeth.

2. **Crawfurdia Pterygocalyx,** *Hemsl.*

Pterygocalyx volubilis, *Maxim. Prim. Fl. Amur.* pp. 198 et 474, t. 9, et *in Mel. Biol.* ix. p. 400; *Franchet, Pl. David.* p. 212.

CHIHLI: near Peking (ex *Maximowicz*); HUPEH: Hsingshan (*A. Henry* !). Herb. Kew.

Amur.

3. **Crawfurdia,** sp., an *C. fasciculatæ* var.?; foliis latioribus brevissime petiolatis; corollæ lobis acuminatis.

HUPEH: Patung district (*A. Henry*, 1038 !). Herb. Kew.

The twining habit and axillary flowers are the only characters separating *Crawfurdia* from the polymorphous genus *Gentiana*. Indeed, as Professor Huxley points out (Journ. Linn. Soc. xxiv. p. 111), the species of *Gentiana* differ as much from each other as they do from most of the other genera of the Order.

1. **Gentiana alsinoides,** *Franchet in Bull. Soc. Bot. France*, xxxi. p. 374.

YUNNAN: Koualapo above Hokin at an altitude of 3200 metres (*Delavay* !). Herb. Kew.

2. **Gentiana aperta,** *Maxim. in Mél. Biol.* xi. p. 264.

KANSUH: region of Tangut (*Przewalski* ex *Maximowicz*).

3. **Gentiana aquatica,** *Linn. Sp. Pl.* ed. 1, p. 229; *Amœn. Acad.* ed. 3, ii. p. 343; *DC. Prodr.* ix. p. 106; *Ledeb. Fl. Ross.* iii. p. 62; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 110; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Franchet, Pl. David.* p. 211.

CHIHLI: Jehol (ex *Franchet*), Peking (ex *Maximowicz*).

North-west India and Siberia.

4. ***Gentiana argentea,** *Royle ex D. Don in Trans. Linn. Soc.* xvii. p. 513; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 112. Var. ALBESCENS, *Franchet.*

Nana, ramis dense capitato-congestis; folia basilaria ovata vel ovato-lanceolata, mucronata, caulinis obovatis latissime albo-marginatis; calycis lobi lanceolati, longe mucronati, flores pallide cæruleos subæquantes, nunc fere ex toto, præter nervum dorsalem, argentei.

Plantula pollicaris vel vix longior, ramulis arcte congestis quasi sphærica, foliorum margine lato argenteo vere albescens; capsula subsessilis, spatulata, apice ala denticulata aucta, illæ *G. argenteæ* simillima, corollam haud excedens.

YUNNAN: hills near Mosoyn (*Delavay*!). Herb. Kew.

Afghanistan eastward.

5. **Gentiana aristata,** *Maxim. in Mél. Biol.* x. p. 678; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.* p. 11.

KANSUH: in the alpine region of the Tetung river (*Przewalski* ex *Maximowicz*).

6. **Gentiana (§ Amarella) arrecta,** *Franchet,* n. sp.

Palmaris vel minor, glabra; e basi ramosissima, ramis fastigiato-arrectis; folia breviter ovata, obtusa, margine scabra; cyma racemiformis; flores longe pedicellati, pedicellis rigidis; calyx profunde 5-lobus, lobis ovato-lanceolatis obtusis; corolla 12 mill. longa, pallide cærulescens, lobis vix patentibus, tubo brevioribus, obtusis; squamæ multifidæ; capsula oblonga, sessilis; semina ovato-reniformia, levia, nitida.

Cum *G. Amarella* præsertim comparanda; caule e basi ramosissimo, foliis breviter ovatis apice minime productis, floribus subduplo minoribus, iis *G. tenellæ* simillimis, facile distincta; a *G. tenella* inflorescentia foliis margine scabris magis longe distat.

YUNNAN: Yentzehay, near Lankong, at 3200 metres (*Delavay*!). Herb. Kew.

7. **Gentiana (§ Chondrophylla) bella,** *Franchet,* n. sp.

Annua, glaberrima, e basi ramosissima, pumila; caules vel rami uniflori, ascendentes; folia rosulata, magna, ovata vel ovato-orbicularia, sub anthesi persistentia, caulina parva e basi sensim attenuata, obovato-spatulata, mucronulata, anguste marginata; flores erecti, breviter pedicellati; calycis lobi tubo breviores, ovato-lanceolati, aristati, erecti; corolla pallide azurea vel lilacina, nunc albida, punctis nigro-purpureis conspersa, calyce duplo longior, lobis ovatis, plicis incisis lobos fere æquantibus.

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* Mr. A. Franchet, the author of the 'Plantæ Davidianæ,' 'Plantæ Delavayanæ,' and other works on Chinese and Japanese botany, has been so good as to contribute diagnoses of his unpublished species of *Gentiana*, which are here printed in the form communicated.

Planta 1–3-pollicaris; folia rosulata 12–29 mill. longa; flores 18–20 mill.

G. aquaticæ præsertim affinis, sed levitate omnium partium, corolla duplo majore facile distincta. *G. prostrata*, Haenke, floribus virgineis elongatis magis distat.

YUNNAN: in pastures above Lankong at 3200 metres (*Delavay*!). Herb. Kew.

8. **Gentiana (§Pneumonanthe) cephalantha,** *Franchet*, n. sp.

Glabra; rhizoma ad collum sæpius pluricaulis, rosulas et caules floriferos ascendentes producens; folia margine levia, subtus glauca, illa rosularum anguste lanceolata, acuta, in petiolum elongatum attenuata; folia caulina pauca, oblongo-lanceolata, inferioribus mox emarcidis, superioribus sub floribus congestis et illos superantibus; flores 6–10, arcte congesti; calyx membranaceus, ore truncatus, lobis foliaceis valde inæqualibus, scilicet 3 linearibus triplo minoribus, 2 majoribus, tubum turbinatum subæquantibus, oblongis; corolla cærulea, calyce duplo longior, breviter lobata, lobis ovatis; plicæ integræ, breves, latæ; capsula parum exserta, seminibus minutis ovatis, foveolatis.

Caules semipedales vel pedales; folia rosularum 10–15 cent. longa; corolla subpollicaris.

Gentianæ Davidi affinis, sed levis, folia haud rigida, illa rosularum longe petiolata.

YUNNAN: Heechanmen, Lankong, at an altitude of 2800 metres (*Delavay*!). Herb. Kew.

9. **Gentiana contorta,** *Royle, Illustr. Himal. Pl.* p. 278, t. 69. f. 3; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 118.

YUNNAN (*Delavay* ex *Franchet* in litt.).

Previously only known from North-western India. An imperfect specimen in Dr. Henry's collection from North Wushan, Szechuen, may be this species.

Unicum specimen lectum cum icone Royleana optime congruit; species rarissima videtur, ex Franchet.

3018 10. **Gentiana (§ Amarella) cyananthiflora,** *Franchet,* n. sp.

Perennis, caudiculos plures steriles proferens; glabra; caules vel rami ascendentes, uniflori; folia rosularum et inferiora obovato-spatulata, obtusa, petiolo elongato; folia caulina (jugis 3 vel 4) oblonga vel breviter ovato-spatulata; calyx laxus, lobis 5 parum inæqualibus, lanceolatis, acutis; corolla 29 mill. longa, cærulea, hypocrateriformis, ad medium 5-loba, tubo lato cylindrico, lobis ovatis, obtusis; squamæ albidæ, multifidæ; capsula oblongo-linearis, sessilis.

Planta speciosa quodam modo *G. Pulmonaria* referens, sed jam vegetationis indole, foliorum forma, calyce et corolla optime diversa.

YUNNAN: Yentzehay at 3500 metres (*Delavay*!). Herb. Kew.

11. **Gentiana Davidi,** *Franchet, Pl. David.* p. 211.

FOKIEN: on the western mountains of medium elevation (*David* ex *Franchet*).

12. **Gentiana decemfida,** *Buch.-Hamilt. in D. Don, Prodr. Fl. Nep.* p. 127; *Griseb. in DC. Prodr.* ix. p. 107; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 112.

Variat inflorescentia laxe paniculata vel fastigiata, plus minus conferta; folia rosularum anguste lanceolata, acuta; caules sæpius e basi ramosissimi sed nunc etiam simplices; folia superiora et calycis lobi latiuscule margine tenui albo donati; capsula parum exserta, obovata, apice rotundata.

Non desunt formæ ad *G. pedicellatam,* Wall., vergentes et inter has species specimina non pauca ambigua remanent. *G. quadrifaria,* Bl., probabiliter speciem sistit peculiarem, nec tantum *G. pedicellatæ* varietatem; *G. squarrosæ* magis affinis videtur.

YUNNAN: in marshes near Tapintze (*Delavay*!). Herb. Kew. North-west and Central Himalaya.

13. **Gentiana Delavayi,** *Franchet in Bull. Soc. Bot. France,* xxxi. p. 377.

YUNNAN: in the mountains above Tapintze and other localities (*Delavay*!). Herb. Kew.

Variat plus minus papillosa, foliis linearibus vel oblongis, floribus pollicaribus vel fere bipollicaribus; acaulis vel caulescens, nunc subpedalis.

14. **Gentiana delicata,** *Hance in Journ. Bot.* 1883, p. 324.

ANWHEI: Wuhu (*Bullock*, hb. *Hance* 22040!); HUPEH: Patung district (*A. Henry*, 717, 462, 304!). Mus. Brit.; Herb. Kew.

15. **Gentiana detonsa,** *Rottb. in Kjöb. Selsk. Skrift.* x. 1770, p. 935, t. 1. fig. 3; *DC. Prodr.* ix. p. 101; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 118; *Franchet, Pl. David.* p. 210.

Gentiana serrata, *Gunner, Fl. Norv.* 1772, p. 101; *A. Gray, Syn. Fl. N. Am.* ii. 1. p. 117.

Gentiana barbata, *Froel. Gent.* p. 114; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474.

CHIHLI: Peking (*David* ex *Franchet*); HUPEH: Paokang and Hsingchang, at 6500 feet (*A. Henry*!); YUNNAN: mountains above Lankong at 3000 metres (*Delavay*!). Herb. Kew.

Scandinavia to North India and Mandshuria, and widely spread in North America.

16. **Gentiana fastigiata,** *Franchet in Bull. Soc. Bot. France*, xxxi. p. 373.

YUNNAN: in the mountains above Lankong and other localities (*Delavay*!). Herb. Kew.

17. **Gentiana (§ Pneumonanthe) filicaulis,** *Hemsl.*, n. sp.

Herba perennis, per totum glabra, caulibus procumbentibus radicantibus pergracilibus, internodiis quam folia longioribus. *Folia* opposita, breviter petiolata, ovata vel lanceolata, maxima vix pollicaria, acuta, basi rotundata, trinervia, margine crispata. *Flores* rosei (*Henry*), pollicares, sæpius terminales, solitarii, brevissime pedunculati, erecti; calyx membranaceus, corolla plus quam dimidio brevior, ad angulos distincte alatus, dentibus angustissimis tubum fere æquantibus, sinibus truncatis; corolla anguste campanulata vel tubuloso-campanulata, lobis latis brevibus acutis, plicis intermediis quam lobi brevioribus erosis; stamina inclusa, infra medium tubi affixa; ovarium longe stipitatum, 1-loculare, placentis 2 multiovulatis; stylus alte bifidus, lobis recurvis.

HUPEH: Fang, at 8000 to 9500 feet (*Henry*!). Herb. Kew.

Allied to *G. Serra*, *G. pterocalyx*, and *G. rhodantha*, Franch., from all of which it is distinguished by its extremely slender stems and distinctly petiolate leaves.

3036 **18. Gentiana (§ Amarella) Henryi,** *Hemsl.*, **n.** sp.

Herba annua (*G. tenellæ* similis sed humilior ramosior foliis petiolatis, floribus minoribus, pedunculis sæpius brevioribus), gracillima, glaberrima, ramosa, 3–4 poll. alta, ramulis angulatis rubentibus. *Folia* subcarnosa, spathulata vel obovata, in petiolum brevem attenuata, 2–4 lineas longa, rotundata. *Flores* terminales, solitarii, cærulei, 3–4 lineas longi, longe graciliterque pedunculati; sepala crassa, sublibera, oblongo-spathulata, obtusissima vel rotundata, basi breviter producta, corollæ dimidium æquans; corolla cylindrica, lobis 5 erectis oblongo-lanceolatis obtusis, tubum æquantibus, fauce longe fimbriatis; stamina inclusa, usque ad medium tubi adnata, filamentis pulverulentis; ovarium sessile, pauciovulatum; stylus nullus, stigmate brevissime bilobo.

HUPEH: Fang (*A. Henry*!). Herb. Kew.

19 **19. Gentiana (§ Pneumonanthe) Jamesii,** *Hemsl.*, n. sp.

Herba perennis ?, glaberrima, caulibus erectis pauciramosis striatis vel simplicibus, 3–6 poll. altis. *Folia* crassa, carnosa, sessilia, semiamplexicaulia, deorsum conferta, ovato-oblonga, obtusa, 2–6 lineas longa. *Flores* solitarii, terminales, sessiles, circiter pollicares, erecti, cærulei; calyx crassus, subcarnosus, tubulosus, quam corolla $\frac{2}{3}$ brevior, lobis latis foliis similis recurvis; corolla tubulosa, lobis ovalibus, plicis quam lobi dimidio brevioribus acutis dentatis vel subfimbriatis; stamina supra medium tubi adnata, antheris sagittatis; ovarium longe stipitatum, 1-loculare, multiovulatum, stylo brevi, stigmate latiuscule bilobo.

CHANGPEISHAN: on the borders of Mandshuria (*James*!). Herb. Kew.

Very distinct from any Chinese species we have seen, and similar to the almost stemless *G. tubiflora*, Wall.

20. Gentiana lineolata, *Franchet in Bull. Soc. Bot. France*, xxxi. p. 375.

Capsula primum inclusa, demum exserta, longissime stipitata, stipite usque bipollicaris; flores constanter 4-meri.

YUNNAN: Mount Heechanmen, above Lankong (*Delavay*!). Herb. Kew.

2542 Var. **verticillaris.** Folia caulina 3–4, verticillata (non constanter), superiora sub flore pluria congesta.

YUNNAN: in pastures of Mount Maokouchang (*Delavay* ex *Franchet*).

Specimina pauca inventa hybridam sistunt inter *G. lineolatum* et *G. Delavayi* vel *G. ternifoliam*, monente cl. Delavay.

21. **Gentiana (§ Chondrophylla) linoides,** *Franchet*, n. sp.

Annua, plus minus ramosa, erecta, gracilis, glaberrima; folia lanceolato-linearia vel linearia, acutissima, secus caulim erecta, margine latiuscule albo-hyalina; flores plus minus apicem versus conferti, breviter pedicellati, 5-meri; calyx viridis, ultra medium lobatus, lobis ovato-lanceolatis longe acuminatis mucronatis; corolla calyce longior, violacea vel ex cæruleo-violacea, tubulosa, lobis brevibus ovatis, plicas bidentatas tantum paulo superans; capsula oblongo-clavata, parum exserta.

G. pictæ affinis, sed gracilitate, foliis acutissimis, margine latiuscule hyalinis, floribus sensim minoribus facile distincta.

YUNNAN: Mount Koualapo near Hokin at 3000 metres, and other localities (*Delavay*!). Herb. Kew.

22. **Gentiana Loureiri,** *Griseb. in DC. Prodr.* ix. p. 108; *Hance in Ann. Sc. Nat.* 5^me^ série, v. p. 229; *Bretschn. Early Res.* p. 162.

Gentiana aquatica, *Lour. Fl. Cochinch.* p. 172, non *Linn.*

Ericala Loureiri, *G. Don, Gen. Syst.* iv. p 192.

CHINA: without locality (*Reeves*!); KWANGTUNG: in various localities (*Sampson*! *Hance*!). Mus. Brit.; Herb. Kew.

23. **Gentiana macrophylla,** *Pall. Fl. Ross.* ii. p. 108, t. 96; *DC. Prodr.* ix. p. 118; *Ledeb. Fl. Ross.* iii. p. 69; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Franchet, Pl. David.* p. 212.

CHIHLI: Peking, Jehol, and Pohuashan (ex *Maximowicz* et *Franchet*).

Dahuria eastward.

2425 24. **Gentiana melandrifolia,** *Franchet*, n. sp.

F. cephalanthæ affinis; foliis ovatis, omnibus (caulinis etiam) longe petiolatis, floribus majoribus usque sesquipollicaribus solitariis vel tantum 2 vel 3 congestis, calyce longe tubuloso, lobis subæqualibus, bene distincta et cum nullis e viciniis confundenda.

YUNNAN: mountains above Tali at 2500 metres (*Delavay*!) Herb. Kew.

2489 **25. Gentiana (§ Pneumonanthe) microdonta,** *Franchet*, n. sp.

Rhizoma crassum, ad collum haud filamentosum, caules florentes et rosulas steriles producens; caules glabri, rigidi, simplices; folia ovato-oblonga, in petiolum distinctum attenuata, margine levia; pedunculi ad axillas foliorum superiorum breves, sæpius triflori, pedicellis subnullis; calyx membranaceus, antice fissus, subspataceus, tubo ore truncato, dentibus brevissimis deltoideis, acutis; corolla intense azurea, calyce plus duplo longior, tubulosa, lobis brevibus ovatis; corollæ plicæ ovatæ, nunc denticulatæ.

G. decumbenti certe affinis sed caulibus rigidis erectis, foliis latioribus et præsertim defectu filamentorum rhizomatis ad collum optime differt.

SZECHUEN: summit of Mount Omei, 11,000 feet (*Faber*!); YUNNAN: mountains above Tali at 4000 metres (*Delavay*!). Herb. Kew.

2600 **26. Gentiana (§ Chondrophylla) microphyta,** *Franchet*, n. sp.

Pumila, gracillima, simplex vel ramosa, uniflora, annua; folia vix conspicue marginata, mucronulata, basilaria oblonga, caulina pauca, ovata, acuta, apice plus minus squarrosa; pedicelli sæpius breves, filiformes; calyx vix ad medium lobatus, lobis lanceolatis, acutis, mucronatis; corolla azurea, calyce vix duplo longior, lobis abrupte mucronulatis; plicæ integræ, ovatæ.

Inter Gentianas facile gracillima; folia caulina vix 2 mill. longa, basilaribus paulo majoribus; corolla 4 mill. longa, vix ultra 1 mill. lata, illam *Microcalæ filiformis* fere referens.

YUNNAN: mountains above Tali at 4000 metres (*Delavay*!). Herb. Kew.

2144 **27. Gentiana (§ Pneumonanthe) otophora,** *Franchet*, n. sp.

Glabra, e collo non fibrilloso crasso pluricaulis, caulibus ascendentibus; folia flaccida, oblongo-lanceolata, obtusa, illa rosularum sterilium in petiolum elongatum attenuata; flores dense fasciculati, pedunculis elongatis, pedicellis abbreviatis; calyx parvus, turbinatus, dentibus linearibus obtusis tubum subæquantibus; corolla calyce 4plo longior, pallide lutescens, punctis fuscis irrorata, fere ad basin usque 5-loba, lobis ovato-oblongis vix acutis, uno latere paulo supra basin dentulo lineari parvo aucta; capsula breviter stipitata, inclusa, seminibus exalatis ovatis.

G. decumbentem primo aspectu referens a qua defectu filamentorum, corollæ forma et colore, calycis indole longe recedit.

YUNNAN: in marshes at Tsangshan, above Tali at 4000 metres (*Delavay*!). Herb. Kew.

28. **Gentiana papillosa,** *Franchet in Bull. Soc. Bot. France,* xxxi. p. 374.

YUNNAN: in the mountains above Tapintze near Tali (*Delavay* ex *Franchet*).

29. **Gentiana phyllocalyx,** *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 116.

Specimina pauca lecta; in unico caulis biflorus. Calyx parvus inter foliorum par supremum occultus, membranaceus, turbinatus, dentibus inæqualibus, scilicet 3 minoribus linearibus, 2 majoribus oblongis tubum æquantibus; corolla calyce sextuplo major. Calyx plantæ typicæ Sikkimensis a calyce plantæ Yunnanensis certe non differt, ut patet ex speciminibus authenticis. Tunc descriptionem a cl. Clarke, Fl. of Brit. Ind. iv. p. 116, non intelligo.

YUNNAN: mountains of Tsangshan, near the summit at 4000 metres (*Delavay* ex *Franchet*).

Sikkim Himalaya at 13,000 to 15,000 feet.

Mr. C. B. Clarke has examined this plant again, and finds that he was in error as to the nature of the calyx, which is as described above by Mr. Franchet.

30. **Gentiana Piasezkii,** *Maxim. in Mél. Biol.* xi. p. 679; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.* p. 11.

SHENSI: without special locality (*Piasezki* ex *Maximowicz*); KANSUH (ex *Kanitz*).

25411 31. **Gentiana (§ Chondrophylla) picta,** *Franchet,* n. sp.

Annua, plus minus ramosa, erecta, glabra vel apice tantum parce papillosa; folia basilaria sub anthesi evanida; caulina linearia vel rarius oblonga, crassiuscula, obtusa; flores subsessiles, racemosi, 4-meri; calycis tubus membranaceus, sæpius purpureo maculatus, lobis linearibus tubo longioribus; corolla calyce duplo longior, tubulosa, pallide cærulea, maculis purpureis conspersa, lobis deltoideis acutis, plicis brevibus bilobis; capsula demum paulo exserta, oblonga, seminibus ovatis angulatis foveolatis.

Semipedalis vel paulo major; folia vix pollicaria; corolla 3 cent. longa.

YUNNAN: mountains of Heechanmen, above Lankong at 2800 metres (*Delavay*!). Herb. Kew.

32. **Gentiana primulæflora,** *Franchet in Bull. Soc. Bot. France*, xxxi. p. 375.

YUNNAN: mountains above Tapintze (*Delavay*!). Herb. Kew.

33. **Gentiana Przewalskii,** *Maxim. in Mél. Biol.* xi. p. 266.

KANSUH: Western alpine regions (*Przewalski* ex *Maximowicz*).

34. **Gentiana (§ Pneumonanthe) pterocalyx,** *Franchet*, n. sp.

Annua, glabra, ramosa, elata; folia basilaria et inferiora sub anthesi evanida, caulina remota, cordato-ovata, obtusa, margine subtilissime scabrida; flores pentameri, ramulos patentes terminantes, inter foliorum par supremum stricte sessiles, sæpius cernui; calyx membranaceus, coloratus, angulis alte alatis, alis erosis longe pilosis; lobi tubo breviores, ovato-lanceolati, acuti; corolla longe tubulosa, calyce triplo longior, intense azurea, lobis brevissimis (ratione tubi) obovatis; plicæ truncatæ, denticulatæ; capsula haud exserta, seminibus ovatis parum compressis ala angusta cinctis.

Pedalis et ultra; foliis 2 cent. longa; flores usque 6–7 cent.

Planta speciosa, calyce ad angulos alte alato jam facile distincta.

YUNNAN: mountains near Hokin at 3500 metres (*Delavay*!). Herb. Kew.

35. **Gentiana (§ Chondrophylla) puberula,** *Franchet*, n. sp.

Annua, tota pilis brevibus cinereo-pubescens, pumila, multicaulis; folia basilaria ovata, obtusa, persistentia, caulina arcte adpressa, obovata, breviter acutata, anguste hyalino-marginata; flores subsessiles vix semipollicares; calyx haud ad medium 5-lobatus, lobis longe mucronatis, ovato-lanceolatis; corolla pallide cærulei, calyce longior, lobis acuminatis; plicæ breviter bidentatæ; capsula longe stipitata, stipite ultra corollam longe producto, fere pollicari; semina acute trigona.

Planta vix ultra pollicaris, caulibus divaricatis, foliis ad florem usque perfecte obtectis.

YUNNAN: in pastures of Yentzehay and Lopinshan, above Lankong, at 3000 to 3200 metres (*Delavay*!). Herb. Kew.

36. **Gentiana pudica,** *Maxim. in Mél. Biol.* x. p. 677; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.* p. 11.

KANSUH: in alpine meadows, frequent (*Przewalski* ex *Maximowicz*).

37. **Gentiana (§ Chondrophylla) pulla,** *Franchet,* n. sp.

Pusilla, usque bipollicaris; folia arcte adpressa caulem totum vestientia, rigida, e basi ovata acuta cum mucronulo, nervo dorsali eximie elevato, marginibus albidis ciliolatis; flores sessiles, fastigiati, parvi; calycis lobi tubum æquantes, anguste lanceolati, acuti; corolla lutescens, calycem parum superans, plicis integris ovatis lobos haud æquantibus.

A *G. humili* foliorum forma et rigiditate, nervo dorsali elevato, florum colore bene distincta.

YUNNAN: mountains near Lankong at 2300 metres (*Delavay*!). Herb. Kew.

38. **Gentiana recurvata,** *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 110.

YUNNAN: Koualapo near Hokin and Tsangshan, above Tali, at 3300 metres (*Delavay*!). Herb. Kew.

Sikkim at 9000 to 12000 feet.

39. **Gentiana (§ Pneumonanthe) rhodantha,** *Franchet,* n. sp.

E rhizomatis collo lignoso multicaulis, caulibus gracilibus erectis glabris ramosis, ramis sæpius secundis; folia rosularum ovata vel ovato-oblonga; caulina plus minus conferta, subtus glauca, coriacea, margine cartilagineo, eroso-scabra, subsessilia, ovato-cordata; flores inter foliorum par supremum sessiles, solitarii; calyx membranaceus, tubulosus, dentibus linearibus tubum subæquantibus; corolla rosea, fasciis purpureis tincta, longe tubulosa, ad tertiam vel ad quartam partem 5-loba, lobis ovatis abrupte mucronatis; plicæ apice in fimbrias setaceas solutæ, lobis demum longiores; capsula inclusa.

Pedalis et bipedalis; folia caulina 1–2 cent. longa; flores 3–6 cent. longa.

Species inter Asiaticas plicarum indole bene distincta. Folia omnino *G. Serræ,* sed plicæ diversæ.

HUPEH: Ichang Gorge (*Maries*!), Ichang, Nanto and mountains to the northward (*A. Henry,* 964, 2990, 3986!); YUNNAN: without locality (*Bourne*!), mountains above Tapintze at 1800 metres (*Delavay*!). Herb. Kew.

Apart from the deeply-fringed folds alternating with the lobes of the corolla, we find no constant character to distinguish this from *G. Serra*, Franchet. In the latter the folds are merely erose.

40. **Gentiana (§ Pneumonanthe) rigescens,** *Franchet*, n. sp.

E rhizomate crasso lignoso multicaulis, glabra; folia crassa, dimorpha, caulinis inferioribus minimis fere squamiformibus sensim in foliis trinerviis ovatis vel obovatis breve pedunculatis transeuntibus, superioribus paulo majoribus ovato-oblongis obtusis; flores 6–10 dense capitati, sessiles, foliis supremis haud superantibus involucrati; calyx membranaceus, turbinatus ore truncatus, lobis oblongis parvis inæqualibus infra apicem tubi ortis; corolla rosea, tubuloso-infundibuliformis, breviter lobata, lobis late deltoideis abrupte acuminatis, plicis parvis integris, ovatis.

Pedalis; folia superiora paulo ultra pollicaria, media 1–2 cent., inferiora 2–4 mill. longa; calyx 6–7 mill.; corolla pollicaris.

YUNNAN: in the mountains above Tali (*Delavay*!). Herb. Kew.

41. **Gentiana rubicunda,** *Franchet in Bull. Soc. Bot. France*, xxxi. p. 373, et *Pl. David.* ii. p. 100.

HUPEH: Fang, Changyang, and Patung district (*A. Henry*!). SZECHUEN: South Wushan (*A. Henry*!); YUNNAN: Tchengfongshan (*Delavay*!). Herb. Kew.

Also in Eastern Mongolia.

42. **Gentiana scabra,** *Bunge, Verzeichniss, Suppl. Fl. Altaica*, p. 21; *Griseb. in DC. Prodr.* ix. p. 112; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 236; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 449.

Gentiana Fortuni, *Hook. Bot. Mag.* t. 4776; *Walp. Ann.* v. p. 416.

Gentiana Buergeri, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 124.

Gentiana Pneumonanthe, *Hance in Journ. Bot.* 1883, p. 324, vix *Linn.*

SHANTUNG: Chefoo (*Forbes*!); CHEKIANG: Ningpo (*Hancock*! *Carles*!); HUPEH: Changyang (*A. Henry*!); KWANGTUNG: Lofaushan (*Faber*!); COREA: Hwanghai province (*Carles*! *Watters*!). Mus. Brit.; Herb. Kew.

Dahuria, Mandshuria, and Japan.

This is exceedingly near the large state of the European *G. Pneumonanthe*, Linn., and should perhaps be regarded as a race of the same species. Usually it can be distinguished by the truncate sinuses of the calyx being scarious and produced above the base of the teeth.

43. **Gentiana Serra,** *Franchet in Bull. Soc. Bot. France,* xxxi. p. 376.

Flores usque 4 cent. longi; planta haud raro tota intense purpurea.

YUNNAN: mountains above Lankong at 2800 metres (*Delavay*!). Herb. Kew.

44. **Gentiana sikkimensis,** *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 114.

Calyx subspathaceus, antice fere ad medium fissus; talem etiam video in speciminibus Sikkimensibus a Museo Kewensi distributis (Hook. f. et Thoms. *Gent.* n. 32, *b*). Character nescio quo casu a cl. descriptore prætervisum.

YUNNAN: summit of Tsangshan above Tali (*Delavay*!). Herb. Kew.

Sikkim at 10,000 to 14,000 feet.

45. **Gentiana squarrosa,** *Ledeb. in Mém. Acad. Pétersb.* v. p. 527, *Fl. Ross.* iii. p. 64, et *Ic. Pl. Fl. Ross.* t. 14; *Griseb. in DC. Prodr.* ix. p. 107; *Franchet, Pl. David.* p. 211; *Hance in Journ. Bot.* 1875, p. 134; *Debeaux, Fl. Shangh.* p. 43; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 111.

CHIHLI: Peking (*Bretschneider*! *Carles*! *Bullock*!); KIANGSU: Shanghai (*Maingay*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang and south of Patung (*A. Henry*!); SZECHUEN: Chungching (*Bourne*!); all along the Min river (*Faber*!); KWANGTUNG (*Wenyon*!); COREA (*Carles*! *Perry*!). Mus. Brit.; Herb. Kew.

Mountains of Northern India, and in Dahuria and Siberia.

3124 46. **Gentiana** (§ **Amarella**) **stellariæfolia,** *Franchet,* n. sp.

Gracilis, haud rigida, ad collum caudiculos vel rosulas steriles, fragiles, emittens; caules ad apicem usque foliati (foliorum juga 4–7), unde pedunculi flore nunc vix longiores, nunc etiam breviores, pro cæteris *G. tenellam* refert.

Species *G. tenellæ* valde affinis, sed jam caudiculis et caulibus magis foliatis facile distincta.

YUNNAN: Lopinshan at Lankong at 3200 metres (*Delavay*!). Herb. Kew.

47. **Gentiana straminea,** *Maxim. in Mél. Biol.* xi. p. 267; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.* p. 11.

Kansuh: western alpine regions (*Przewalski* ex *Maximowicz*).

48. **Gentiana striata,** *Maxim. in Mél. Biol.* xi. p. 265.

Kansuh: western alpine regions (*Przewalski* ex *Maximowicz*).

49. **Gentiana stylophora,** *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 118.

Yunnan: mountain woods, Tsangshan, above Tali, at 4000 metres (*Delavay* ex *Franchet*).

Flores lutei campanulati, ex *Franchet*.

Eastern India.

7602 50. **Gentiana (§ Chondrophylla) sutchuenensis,** *Franchet*, n. sp.

Annua, tota tenuissime scabrida, ramosa; folia angustissime marginata, margine aspera, basilaria obovata, caulina e basi latiore ovata vel ovato-lanceolata, obtusa, vel nunc acuminata; flores conferti, subsessiles, pallide cærulei; calycis lobi ovato-lanceolati, subpatentes; corolla calyce subduplo longior, plicis ovatis integris lobos fere æquantibus.

Planta 3–5-pollicaris, *G. papillosæ* vere affinis, sed foliorum forma, papillarum indole, corolla duplo majore sat distincta.

Szechuen: along the river Yangtze near Keoupatan (*Delavay* ex *Franchet*).

51. **Gentiana ternifolia,** *Franchet in Bull. Soc. Bot. France*, xxxi. p. 377.

Yunnan: summit of Heechanmen, above Lankong at 3000 metres (*Delavay*!). Herb. Kew.

52. **Gentiana Thunbergii,** *Griseb. in DC. Prodr.* ix. p. 108; *Franch. et Savat. Enum. Pl. Jap.* i. p. 323; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384.

Shingking: Fungshan and Corean Gate (*Ross*!); Moukden to Yaloo river (*Webster*!); Chekiang: Tahoo lake (*Carles*!); Corea: Chemulpo (*Carles*!). Herb. Kew.

Japan and Mandshuria.

53. **Gentiana tibetica,** *King in Hook. Ic. Pl.* xv. p. 33, t. 1441; *Hook. f. Fl. Brit. Ind.* iv. p. 733.

Yunnan: mountains above Hokin and Mosoyn and other localities (*Delavay* ex *Franchet*).

Sikkim and Bhotan.

C Fitch del et lith.

GENTIANA (§ MEGACODON) VENOSA, *Hemsl.*

J.N. Fitch imp.

54. **Gentiana vandellioides**, *Hemsl.*, n. sp.

Herba annua, glabra, debilis (*G. recurvatæ* similis), multicaulis, 4–6 poll. alta, ramosa, caulibus ramulisque gracilibus angulatis. *Folia* crassiuscula, radicalia rosulata, sessilia, oblonga vel spathulata, maxima vix pollicaria, caulina opposita, petiolata, ovata, 3–6 lineas longa, acuta. *Flores* terminales, solitarii, cærulei, graciliter pedunculati, 7–9 lineas longi; calyx membranaceus, fere hyalinus, quam corolla $\frac{2}{3}$ brevior, dentibus setaceis sinibus truncatis; corolla infundibularis, lobis deltoideo-rotundatis plicis similis sed paulo brevioribus integris; stamina infra medium tubi inserta; ovarium breviter stipitatum, stylo brevi, stigmate bifido.

HUPEH: Fang, in clefts of rocks at 7000 feet (*A. Henry*!). Herb. Kew.

55. **Gentiana** (§ **Megacodon**, *Hemsl.*) **venosa**, *Hemsl.*, **n. sp.** (Plate III.)

Herba monocarpica, erecta, omnino glaberrima, flavo-viridis, caule robusto infra inflorescentiam simplici inter nodos cavo 5–6 ped. alto. *Folia* (radicalia non visa) opposita, crassiuscula, semi-amplexicaulia vel inferiora in petiolum attenuata, oblongo-lanceolata, vel superiora sub floribus fere linearia, maxima pedalia, omnia trinervia, vix acuta. *Flores* pauci (circiter 11), ampli, aperte campanulati, circiter 3 poll. diametro, in axillis foliorum (vel bractearum) superiorum solitarii, cum unico terminali, longe pedunculati; sepala libera, fere æqualia, oblongo-lanceolata, $1\frac{3}{4}$–2 poll. longa, acuminata, herbacea, margine interiore tenuiora, decolora, scariosa; corolla intus nuda, alte 5-lobata, albida, prominenter viridi-venosa, lobis latis contiguis imbricatis rotundatis, plicis nullis; stamina glabra, prope corollæ basin inserta et dimidio breviora, filamentis deorsum dilatatis, antheris sagittatis subversatilibus; ovarium glabrum, sessile, 1-loculare, placentis 4 multiovulatis; stylus brevis, stamina paulo superans, stigmate amplissimo late bilobato.

SZECHUEN: North Wushan (*A. Henry*!). Herb. Kew.

This showy plant might be regarded as deserving of generic rank; but as the genus *Gentiana* is at present constituted, it seems better to make it a section of that, and the name given might serve if it were eventually separated from *Gentiana*. It is nearest the Indian *G. stylophora*, Clarke.

56. **Gentiana yunnanensis,** *Franchet in Bull. Soc. Bot. France,* xxxi. p. 376.

YUNNAN: Heechanmen, above Lankong (*Delavay*!). Herb. Kew.

57. **Gentiana Zollingerii,** *Fawcett in Journ. Bot.* 1883, p. 183; *Maxim. in Mél. Biol.* xii. p. 758.

Gentiana Thunbergii, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 543, nec *Griseb. Maxim. Mél. Biol.* x. p. 397; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384.

SHINGKING: Corean Gate and Fungshan (*Ross*!), Moukden to Yaloo river (*Webster*!); COREA: Chemulpo and Soul mountains (*Carles*!). Herb. Kew.

Japan.

1. **Pleurogyne rotata,** *Griseb. Gentian.* p. 309, et *in DC. Prodr.* ix. p. 122; *Maxim. in Mél. Biol.* xii. p. 760.

KANSUH: Western regions (*Przewalski* ex *Maximowicz*).

Europe, through Siberia to Kamtschatka, and in arctic North America.

1. **Swertia angustifolia,** *Buch.-Hamilt. in D. Don, Prodr. Fl. Nep.* p. 127; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 125; *Wall. Pl. As. Rar.* iii. t. 204.

Ophelia angustifolia, *D. Don in Trans. Linn. Soc.* xvii. p. 524; *DC. Prodr.* ix. p. 126; *Bot. Mag.* t. 5687. ff. 3, 4.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 42, 527, 2243, 4343 !). Herb. Kew.

Himalaya mountains from the Chenab to Bhotan.

2 o.c 2. **Swertia** (§ **Ophelia**) **bella,** *Hemsl.*, n. sp.

Herba annua, erecta, stricta, 4–12 poll. alta, gracilis, glaberrima, caulibus fere filiformibus simplicibus vel a basi plus minusve ramosis interdum multiramosis. *Folia* crassiuscula, sessilia vel subsessilia, semiamplexicaulia, ovata vel cordato-ovata, maxima 9–10 lineas longa, obtusa, venis obscuris. *Flores* pulchre cærulei (*A. Henry*), pentameri, usque ad 1 poll. 8 lineas diametro, sed sæpius pollicem vix excedentia, axillares et solitarii

vel pseudoterminales, longe graciliterque pedunculati; calycis segmenta foliis simillima sed angustiora et costa in mucronem brevem terminante; corolla rotata calycem duplo superans; segmenta anguste obovato-oblonga vix acuta, longitudinaliter 5–7-striata, basi intus appendice longiuscule fimbriata instructa; stamina quam corolla dimidio breviora, antheris magnis sagittatis; ovarium sessile, compressum, glabrum, multiovulatum, stylo subnullo.

HUPEH: Fang and Hsingshan at 9000 to 9500 feet (*A. Henry*!). Herb. Kew.

This has much the aspect of some of the large-flowered Mexican species of *Erythræa* (*Gyrandra*). In size the flowers equal those of *S. cuneata*, Wall., and *S. cærulea*, Royle.

3. **Swertia bimaculata,** *Clarke in Journ. Linn. Soc.* xiv. p. 449, et *in Hook. f. Fl. Brit. Ind.* iv. p. 123.

Ophelia bimaculata, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 35; *Franch. et Savat. Enum. Pl. Jap.* i. p. 324.

CHEKIANG: Ningpo (*Hancock*!); HUPEH: in various localities (*A. Henry*!). Herb. Kew.

Eastern India and Japan.

4. **Swertia chinensis,** *Franchet in Bull. Soc. Bot. France,* xxxii. p. 26.

Ophelia chinensis, *Bunge in DC. Prodr.* ix. p. 126, cum β. daurica; *Franchet, Pl. David.* p. 212.

Ophelia diluta, *Ledeb. Fl. Ross.* iii. p. 73; *Maxim. in Mél. Biol.* ix. p. 399, et *in Bull. Soc. Nat. Mosc.* 1879, p. 33.

Swertia diluta, *Benth. et Hook. f. Gen. Plant.* ii. p. 117; *Hance in Journ. Bot.* 1882, p. 37.

Swertia rotata, *Thunb. Fl. Jap.* p. 115, non *Linn.*

Pleurogyne rotata, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 35; *Franch. et Savat. Enum. Pl. Jap.* i. p. 324, nec *Griseb.*

CHIHLI: Peking (*Moellendorff*! *Bretschneider*!); SHINGKING: Peiling and other localities (*Webster*! *Ross*!); SHANTUNG: Chefoo (*Forbes*!); CHEKIANG: Ningpo (*Hancock*!). Mus. Brit.; Herb. Kew.

Siberia, Mandshuria, and Japan.

Exceedingly variable in the relative length of the calyx and corolla, the former being sometimes double the length of the latter, sometimes barely so long.

5. **Swertia Davidi,** *Franchet, Pl. David.* ii. p. 100.

Hupeh: Ichang, Nanto and immediate neighbourhood (*A. Henry*, 142, 973, 1060, 3263, 4444! *Faber*!); Szechuen: valley of the Yangtzekiang (*David*!). Herb. Kew.

6. **Swertia erythrosticta,** *Maxim. in Mél. Biol.* xi. p. 268.

Hupeh: Hsingshan (*A. Henry*!); Kansuh: western alpine regions (*Przewalski* ex *Maximowicz*). Herb. Kew.

7. **Swertia** (§ **Ophelia**) **oculata,** *Hemsl.*, n. sp.

Herba annua, erecta, gracillima, glaberrima, caulibus trichotomo-ramosis nitidis obscure 4-angulatis. *Folia* tenuia, lineari-lanceolata, usque ad 2½ poll. longa, subobtusa, obscure trinervia. *Flores* albi (*Henry*), pentameri, circiter 5 lineas diametro, axillares, solitarii, et pseudoterminales 3 aggregati, longe graciliterque pedunculati; calycis segmenta crassiuscula, lineari-oblonga, vix acuta, inæqualia, longiora corollam excedentia; corollæ rotatæ segmenta ovato-lanceolata, subobtusa, intus medio biglanduloso-maculata, ceterum nuda; stamina quam corolla paullo breviora, filamentis vix dilatatis; ovarium sessile, glabrum, multiovulatum, stigmate sessili, bilobati.

Szechuen: North Wushan (*A. Henry*!). Herb. Kew.

This resembles *S. bimaculata* in having two large spots on the middle of the corolla-lobes; but is otherwise very different, as it also is from all others that we know.

8. **Swertia pulchella,** *Buch.-Hamilt. in Wall. Cat.* ex *D. Don in Trans. Linn. Soc.* xvii. p. 524; *Hook. f. Fl. Brit. Ind.* iv. p. 125.

Ophelia pulchella, *D. Don, loc. cit.*; *Franchet, Pl. David.* p. 213.

Kiangsi: Kiukiang (*David* ex *Franchet*).

North India from Kangra to the Khasia mountains, at 500 to 4000 feet.

9. **Swertia** (§ **Ophelia**) **punicea,** *Hemsl.*, n. sp.

Herba annua, erecta, usque ad bipedalis, undique glabra, caulibus graciliusculis 4-angulatis breviter ramosis, ramulis trichotomis lateralibus floriferis gracilibus adscendentibus. *Folia* crassiuscula, lanceolata, lineari-lanceolata, vel fere linearia, usque ad bipollicaria, utrinque attenuata, acuta obscure trinervia, siccitate sæpius nigrescentia. *Flores* atro-rubri (*Henry*!), 5-ameri, circiter 9 lineas diametro, graciliter pedunculati; calycis segmenta crassiuscula, lineari-oblonga, vix acuta unicostata, quam corolla triente breviora; corollæ segmenta ovato-lanceolata, acuminata, infra medium foveolis 2 angustis elongatis circum fimbriatis instructa; stamina quam corolla breviora, filamentis non dilatatis, antheris versatilibus; ovarium sessile, compressum, multiovulatum, stylo subnullo.

HUPEH: Ichang, Patung and neighbourhood (*A. Henry*, 2823, 2898 !). Herb. Kew.

10. **Swertia tetragona,** *Clarke ? in Hook. f. Fl. Brit. Ind.* iv. p. 122.

Ophelia tetragona, *Edgew. in Trans. Linn. Soc.* xx. p. 86.

HUPEH: Patung district (*A. Henry*, 3154 !); SZECHUEN: South Wushan (*A. Henry* !). Herb. Kew.

Kashmir to Khasia.

11. **Swertia tetraptera,** *Maxim. in Mél. Biol.* xi. p. 269.

KANSUH: western alpine regions (*Przewalski* ex *Maximowicz*).

12. **Swertia vacillans,** *Maxim. in Mél. Biol.* xi. p. 269, in nota sub *S. tetraptera*; *Hance in Journ. Bot.* 1885, p. 326.

Ophelia vacillans, *Hance in Ann. Sc. Nat.* 5^me^ série, v. p. 229.

KWANGTUNG: Tingushan (*Sampson* !), hills of Pakwanshan (*Hance*, 7561 !). Mus. Brit.

1. **Halenia elliptica,** *D. Don in Trans. Linn. Soc.* xvii. p. 529; *Griseb. in DC. Prodr.* ix. p. 129; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 130.

1901 Var. **grandiflora,** *Hemsl.*; floribus duplo majoribus, calycis lobis latioribus.

HUPEH: Ichang, Patung, Hsingshan, and Paokang (*A. Henry* !). Herb. Kew.

North India, from Kashmir to Bhotan.

2. **Halenia sibirica,** *Borkh. in Roem. Arch.* i. p. 25; *Griseb. in DC. Prodr.* ix. p. 128; *Ledeb. Fl. Ross.* iii. p. 74; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Franchet, Pl. David.* p. 213.

CHIHLI: near Peking (*Tatarinow* ! and others). Herb. Kew.

The Ural eastward to Mandshuria, Kamtschatka, and Japan.

1. **Limnanthemum cristatum,** *Griseb. Gentian.* p. 342, et *in DC. Prodr.* ix. p. 139; *Hance in Journ. Bot.* 1878, p. 229; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 131.

FOKIEN: Amoy (*Hance*!); FORMOSA: Tamsui (*Oldham*! *Hancock*!); KWANGTUNG: numerous localities (*Hance*! *Sampson*! *Tate*! *Ford*!). Mus. Brit.; Herb. Kew.

Almost throughout India and Malaya to the Philippines.

2. **Limnanthemum nymphoides,** *Hoffmgg. et Link, Fl. Portug.* i. p. 344; *DC. Prodr.* ix. p. 138; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 131.

Villarsia nymphoides, *Vent. Choix,* no. 9; *Bunge, Enum. Pl. Chin. Bor.* p. 45.

CHIHLI: Peking (*Bretschneider*!); KIANGSU: Shanghai (*Maingay*!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Amoy (*Fortune,* 108!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!). Mus. Brit.; Herb. Kew.

Western Europe, through North India and Siberia to Mandshuria.

90. POLEMONIACEÆ.

1. **Polemonium cæruleum,** *Linn. Sp. Pl.* ed. 1, p. 162; *DC. Prodr.* viii. p. 317; *Franchet, Pl. David.* p. 213; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 133.

CHIHLI: Peking (*Bretschneider*!); SHINGKING: between Moukden and Tungcheshien (*James*!); EAST COREA (*Perry*). Herb. Kew.

Western Europe to Japan and Sachalin, and widely spread in North America.

91. HYDROPHYLLACEÆ.

1. **Hydrolea zeylanica,** *Vahl, Enum. Pl.* ii. p. 46; *DC. Prodr.* x. p. 180; *Hance in Journ. Bot.* 1878, p. 230; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 133.

Hydrolea inermis, *Lour. Fl. Cochinch.* p. 172?; *A. W. Benn. in Journ. Linn. Soc.* xi. p. 275.

KWANGTUNG: near Canton (*Sampson*!), North River (*Ford*!). Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, America, and Australia.

92. BORAGINEÆ.

1. **Cordia Myxa,** *Linn. Sp. Pl.* ed. 1, p. 190; *DC. Prodr.* ix. p. 479; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 136; *Wight, Illustr. Ind. Bot.* t. 169.

FORMOSA (*Oldham*, 350! *Playfair*!); HAINAN (*B. C. Henry*!). Herb. Kew.

Throughout India and Malaya, and extending to Egypt, South China, and North Australia.

[*Cordia Loureiri*, Rœm. et Schult. (Syst. Veg. iv. p. 465), syn. *Varronia sinensis*, Lour. (Fl. Cochinch. p. 138), is an obscure plant; and *Cordia sinensis*, Lam. (Illustr. n. 1914), has not been identified by subsequent writers.]

2. **Cordia venosa,** *Hemsl.*, n. sp.

Arbor parva (*Faber*), ramulis ultimis floriferis graciliusculis minute puberulis pallidis, internodiis brevissimis. *Folia* longe graciliterque petiolata, papyracea, ovato-lanceolata, caudato-acuminata, absque petiolo usque ad 5 poll. longa, utrinque, sed præcipue subtus secus venas, parcissime minutissimeque setulosa, prominenter reticulato-venosa, venis lateralibus primariis utrinque circiter 6 prope marginem inter se anastomosantibus; petiolus puberulus, fere teres, gracilis, 9–12 lineas longus. *Flores* in cymas laxiusculas terminales breviter pedunculatas dispositi; cymæ ramulis pedicellisque brevibus filiformibus; calyx parvus (circiter 2 lineas diametro), puberulus, cupularis, 5-dentatus, dentibus deltoideis, fructifer paullo auctus; corolla .... *Fructus* glaber, depresso-globosus, circiter 3 lineas diametro.

CHEKIANG: Ningpo mountains (*Faber*, 183, 1887!). Herb. Kew.

A very distinct species, of which complete specimens are desirable.

1. **Ehretia acuminata,** *R. Br. Prodr. Fl. Nov. Holl.* p. 497; *Benth. Fl. Austral.* iv. p. 387; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 141.

Ehretia serrata, *Roxb. Fl. Ind., ed. Carey et Wall.* ii. p. 340; *Franch. et Savat. Enum. Pl. Jap.* i. p. 333; *Bot. Reg.* t. 1097, cum var. β. obovata; *DC. Prodr.* ix. p. 503.

Ehretia pyrifolia, *D. Don, Prodr. Fl. Nep.* p. 102.

Ehretia ovalifolia, *Hassk. Cat. Hort. Bogor.* 1844, p. 137, non *Wight.*
Cordia thyrsiflora, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 515.

KIANGSU: Shanghai (*Carles*! *Faber*!); CHEKIANG: Ningpo mountains (*Faber*!); FORMOSA: Tamsui (*Oldham*, 347, 348, 349!); HUPEH: Nanto and mountains to the northward (*A. Henry*, 1941, 3907!); KWANGTUNG: Macao (*Callery*!); YUNNAN: Momien (*Anderson*!); HAINAN: Hoihow (*Hancock*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

India, Malaya, and North Australia.

The Indian specimens are in young fruit; but we have no hesitation in accepting Mr. C. B. Clarke's suggestion (Fl. Brit. Ind. iv. p. 141) that the Chinese specimens belong to the same species.

"The tsukang tree; the wood is light, and good for furniture" (*Dr. Henry*).

2. **Ehretia buxifolia,** *Roxb. Corom. Pl.* i. p. 42, t. 57; *DC. Prodr.* IX. p. 509; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 144; *Hance in Journ. Bot.* 1878, p. 111.

Ehretia heterophylla, *Spreng. Syst. Veg.* i. p. 648.
Carmona heterophylla, *Cav. Ic. Pl.* v. p. 23, t. 438; *Hook. et Arn. Bot. Beech. Voy.* p. 267.

FORMOSA: West coast (*Wilford*, 528!), Takow (*Playfair*!); KWANGTUNG: Paksha (*Hance*, 9368!); HAINAN (*Swinhoe*!); LUCHU ARCHIPELAGO (*Beechey*! *Wright*!). Mus. Brit.; Herb. Kew.

Deccan or Western peninsula of India and Malaya.

2'44 3. **Ehretia formosana,** *Hemsl.*, n. sp.

Arbor vel *frutex* ramulis floriferis crassiusculis puberulis. *Folia* petiolata, papyracea, late ovata, obovata vel fere orbicularia, usque ad 6 poll. longa, abrupte acuminata, basi rotundata, supra glabra vel minutissime puberula, subtus molliter pubescentia. *Flores* vix ½ poll. diametro, in cymas terminales densiusculas 2–3 poll. latas dispositi, pedicellis quam calyx brevioribus puberulis; calycis puberuli segmenta linearia, vix acuta, erecta, tubo corollæ triente breviora; corolla breviter hypocraterimorpha, glabra, lobis latis rotundatis tubum subæquantibus; genitalia breviter exserta. *Fructus* ignotus.

FORMOSA: West coast (*Wilford*, 539!), South-west (*Swinhoe*!). Herb. Kew.

This differs from *E. longiflora*, Champ., in its larger, hairy

leaves, very much longer hairy calyx-lobes, and in the broader cylindrical corolla-tube.

4. **Ehretia Hanceana,** *Hemsl.*, n. sp.

Arbor ramulis floriferis gracilibus teretibus muriculatis vel lævibus glabris, internodiis quam folia multo brevioribus. *Folia* petiolata, papyracea vel subcoriacea, ovato-oblonga, absque petiolo usque ad 3 poll. longa, utrinque nunc rotundata nunc subcuneata, margine cartilaginea, supra glabra, nitida, subtus pallidiora, opaca, in axillis venarum primarium sæpe barbata, venis lateralibus primariis utrinque sæpius 4 cum venis secundariis conspicue reticulatis; petiolus 4–5 lineas longus, leviter canaliculatus, marginibus muriculatis. *Flores* circiter 3 lineas diametro, in cymas parvas (2–3 poll. diametro) terminales breviter pedunculatas puberulas dispositi; calycis puberuli lobi ovato-oblongi, obtusissimi, ciliolati; corolla campanulato-infundibularis, glabra, vesiculosa (an semper?); genitalia longiuscule exserta; ovarium glabrum. *Drupa* parva.—*Ehretia ovalifolia*, Hance in Journ. Bot. 1878, p. 110, *non* Wight *nec* Hassk.

HAINAN: Hoihow (*Sampson*, hb. *Hance*, 13709! *Hancock*!). Mus. Brit.; Herb. Kew.

This bears a general resemblance to *E. ovalifolia*, to which Hance doubtingly referred it; but it is readily distinguished by the muriculate branches and petioles, the strong venation of the leaves, and looser inflorescence.

5. **Ehretia longiflora,** *Champ. in Hook. Kew Journ. Bot.* v. p. 58; *Walp. Ann.* v. p. 541; *Benth. Fl. Hongk.* p. 234.

HONGKONG (*Champion*! *Wright*! *Wilford*! *Urquhart*!). Mus. Brit.; Herb. Kew.

6. **Ehretia macrophylla,** *Wall. in Roxb. Fl. Ind., ed. Carey et Wallich*, ii. p. 343; *DC. Prodr.* ix. p. 503; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 141.

Ehretia Dicksoni, *Hance in Ann. Sc. Nat.* 4me série, xviii. p. 224.

FORMOSA: Tamsui (*Oldham*, 347!), Kelung (*Ford*!); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 1885, 3522, 3866!); SZECHUEN: Wushan (*Faber*! *A. Henry*!). Mus. Brit.; Herb. Kew.

Nepal.

7. **Ehretia resinosa,** *Hance in Journ. Bot.* 1880, p. 299.

FORMOSA: South-western coast, near Takan (*Swinhoe*, hb. *Hance*, 12333!). Mus. Brit.

There is an incomplete specimen in the Kew Herbarium of what may be another undescribed species of *Ehretia*, collected by the Rev. B. C. Henry in Hainan.

1. **Coldenia procumbens,** *Linn. Sp. Pl.* ed. 1, p. 125; *DC. Prodr.* ix. p. 558; *Lamk. Illustr.* t. 89; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 144.

FORMOSA: Takow (*Playfair*!). Herb. Kew.

Throughout the tropics.

1. **Tournefortia argentea,** *Linn. f. Suppl. Pl.* p. 133; *DC. Prodr.* ix. p. 514; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 145; *Hemsl. Bot. 'Challenger' Exped.* i. 3. p. 167; *Maxim. in Mél. Biol.* viii. p. 540.

FORMOSA: Kelung (*Oldham*, 353!); PRATAS ISLAND (*Wilford*, 437!). Mus. Brit.; Herb. Kew.

Coasts of the Indian and Pacific Oceans, including Australia and the most remote coral-islands, extending eastward in the Pacific to Ducie Island, and westward in the Indian Ocean to Madagascar and the Amirante group, yet apparently not reaching either the African or the American mainland.

2. **Tournefortia ovata,** *Wall. Cat.* 908; *DC. Prodr.* ix. p. 516; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 147, saltem pro parte.

Tournefortia Sampsoni, *Hance in Journ. Bot.* 1868, p. 330.

KWANGTUNG: rocky localities near Saichiishan (*Sampson*, hb. *Hance*, 13035!), West river (*Ford*!). Mus. Brit.; Herb. Kew.

The Chinese specimens are exactly like specimens collected in Burma by Griffith (5928, Kew distribution, in part), and named *T. ovata*, Wall., by Mr. C. B. Clarke, but not like the Rangoon specimens collected by M'Clelland. *T. viridiflora*, Wall., is probably a form of the same species.

3. **Tournefortia sarmentosa,** *Lam. Illustr.* n. 1877?; *DC. Prodr.* ix. p. 516; *Miq. Fl. Ind. Bat.* ii. p. 927.

FORMOSA (*Swinhoe*! *Maries*! *Playfair*!). Mus. Brit.; Herb. Kew.

Mauritius and Seychelles to the Philippine Islands and

Australia. Possibly there may be more than one species concerned here, though the Formosan specimens are exactly like some of the Malayan.

4. **Tournefortia sibirica,** *Linn. Sp. Pl.* ed. 1, p. 202.

Tournefortia Arguzia, *Rœm. et Schult. Syst. Veg.* iv. p. 540; *DC. Prodr.* ix. p. 514; *Ledeb. Fl. Ross.* iii. p. 97; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475, et *in Bull. Soc. Sc. Nat. Mosc.* 1879, p. 32, et *in Mél. Biol.* viii. p. 539; *Debeaux, Fl. Tchef.* p. 100, et *Fl. Tients.* p. 31; *Franchet, Pl. David.* p. 213, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 237. (Varietates *angustifolia* et *latifolia.*)

CHIHLI: near Peking (*Bushell*! *Bretschneider*!), var. *angustifolia*; SHANTUNG: Chefoo (*Perry*! *Hancock*!); COREA: Port Chusan (*Wilford*!), Talienhwan (*Swinhoe*! *Birnie*!); COREAN ARCHIPELAGO: Soutsik group (*Oldham*!), var. *latifolia.* Mus. Brit.; Herb. Kew.

Caucasus eastward through Siberia and Mongolia to Mandshuria and Japan.

1. **Heliotropium indicum,** *Linn. Sp. Pl.* ed. 1, p. 130; *Benth. Fl. Hongk.* p. 235; *Maxim. in Mél. Biol.* viii. p. 540; *Bot. Mag.* t. 1837.

Heliophytum indicum, *DC. Prodr.* ix. p. 556.

KIANGSU: Shanghai (*Maingay*!); FORMOSA: Takow (*Playfair*!); KWANGTUNG: Macao (*Callery*!), Pakhoi (*Playfair*!); HONGKONG (*Champion*!); HAINAN (*Swinhoe*!). Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, and America.

2. **Heliotropium strigosum,** *Willd. Sp. Pl.* i. p. 743; *DC. Prodr.* ix. p. 546; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 151, cum var. *brevifolia.*

Heliotropium brevifolium, *Wall. in Roxb. Fl. Ind., ed. Carey & Wallich,* ii. p. 2; *DC. Prodr.* ix. p. 546; *Hance in Journ. Bot.* 1878, p. 230; *Maxim. in Mél. Biol.* viii. p. 540.

FOKIEN: Amoy (*Hance*!); FORMOSA: Takow (*Playfair*!); KWANGTUNG: Pakhoi (*Playfair*!), Lantao Islands (*Ford*!); HAINAN (*Swinhoe*!). Mus. Brit.; Herb. Kew.

India, Malaya, and Australia.

1. **Omphalodes blepharolepis,** *Maxim. in Mél. Biol.* xi. p. 269.

KANSUH: western alpine regions (*Przewalski* ex *Maximowicz*).

2. **Omphalodes cordata,** *Hemsl.*, n. sp.

Herba annua, fere undique parce strigillosa, a basi ramosa, ramis gracilibus debilibus adscendentibus circiter pedalibus, retrorsum strigillosis. *Folia* membranacea, cordato-ovata vel suprema ovata, acuminata, absque petiolo ½–3 poll. longa, radicalia longe graciliterque petiolata, petiolo interdum 4–5 poll. longo, petiolis foliorum caulinorum sursum gradatim brevioribus. *Flores* cærulei, circiter 3 lineas diametro, racemosi, racemis axillaribus vel pseudoterminalibus 1½–3 poll. longis gracilibus ebracteatis, pedicellis filiformibus flores æquantibus vel longioribus; calyx hispidulus, alte 5-lobatus, lobis ovato-lanceolatis acutis, fructifer accretus, fere 6 lineas diametro; corollæ glabræ subrotatæ tubus brevis, lobis fere orbicularibus patentibus; squamæ latæ, breves, truncatæ, crassæ, carnosæ; stamina inclusa, filamentis filiformibus brevissimis; ovarium glabrum, læve, stylo incluso. *Nuculæ* parce puberulæ, ceterum nudæ, ventro angulatæ, dorso alte oblongo-cupulatæ, margine introflexo integro.

HUPEH: Patung (*A. Henry*, 1445, 4029, 5412!); SZECHUEN: South Wushan (*A. Henry*, 5610!). Herb. Kew.

3. **Omphalodes diffusa,** *Maxim. in Mél. Biol.* xi. p. 270.

KANSUH: Western alpine regions (*Przewalski* ex *Maximowicz*).

4. **Omphalodes sericea,** *Maxim. in Mél. Biol.* viii. p. 558; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384; *Franch. et Savat. Enum. Pl. Jap.* i. p. 337.

SHINGKING: Hingjing, Laoling, and other localities (*Ross*! *Webster*!); COREA: Chemulpo (*Carles*!). Herb. Kew.

Japan.

5. **Omphalodes trichocarpa,** *Maxim. in Mél. Biol.* x. p. 681; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.* p. 11.

KANSUH: alpine meadows along the river Tetung (*Przewalski* ex *Maximowicz*).

1. **Thyrocarpus fulvescens,** *Maxim. in Mél. Biol.* x. p. 680.

SHENSI: by the river Han above Sinaufu (*Piasezki* ex *Maximowicz*).

2. **Thyrocarpus glochidiatus,** *Maxim. in Mél. Biol.* x. p. 680; *Franchet, Pl. David.* p. 216.

SHENSI: southern part (*David* ex *Franchet*); KANSUH (*Piasezki* ex *Maximowicz*).

3. **Thyrocarpus Sampsoni,** *Hance in Ann. Sc. Nat.* 4me série, xviii. p. 225; *Maxim. in Mél. Biol.* viii. p. 562, et xi. p. 679.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 772, 823, 842, 1168, 3367 A, 3391!); SZECHUEN: Min river and Wushan (*Faber*!); KWANGTUNG: Pingishan (*Sampson*, hb. *Hance*, 9014!), without locality (*Ford*!). Mus. Brit.; Herb. Kew.

1. **Cynoglossum divaricatum,** *Steph. in Lehm. Asperif.* p. 161, n. 124; *DC. Prodr.* x. p. 154; *Maxim. in Mél. Biol.* viii. p. 553; *Franchet, Pl. David.* p. 215.

CHIHLI: western hills by the river Hunho (*Hancock*!), Jehol (*David*, 1921). Herb. Kew.

Siberia, Mongolia.

2. **Cynoglossum furcatum,** *Wall. in Roxb. Fl. Ind., ed. Carey et Wallich,* ii. p. 6; *DC. Prodr.* x. p. 149; *Maxim. in Mél. Biol.* viii. p. 554; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 155.

HUPEH: Patung, Nanto and mountains to the northward (*A. Henry*, 2081, 4981, 5919!); YUNNAN: Poneshee (*Anderson*!). Herb. Kew.

Afghanistan, throughout India to Ceylon and Japan.

We are not satisfied that this species is always distinguishable from *C. micranthum*, Desf., nor that we have correctly referred the specimens, some to the one and some to the other.

3. **Cynoglossum javanicum,** *Thunb.*; *Maxim. in Mél. Biol.* viii. p. 555.

Echinospermum javanicum, *Lehm. Asperif.* p. 118, n. 91; *DC. Prodr.* x. p. 143; *Hook. et Arn. Bot. Beech. Voy.* p. 267.

LUCHU ARCHIPELAGO (*Beechey* ex *Hooker* et *Arnott*).

Java.

The plant referred to by Hooker and Arnott is not to be found in the Kew Herbarium.

4. **Cynoglossum micranthum,** *Desf. Cat. Hort. Par.* 1804, p. 220; *DC. Prodr.* x. p. 149; *Maxim. in Mél. Biol.* viii. p. 555; *Franchet, Pl. David.* p. 215; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 156.

FORMOSA (*Oldham*, 352!); HUPEH: Nanto and mountains to the northward (*A. Henry*, 1896!); KWANGTUNG (*Sampson*, hb. *Hance*, 9192!). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya, and also found in Eastern Africa.

5. **Cynoglossum,** sp. n.? Foliis caulinis hispidulis ovato-lanceolatis 1–2-pollicaribus acuminatis 5-nerviis, floribus laxis mediocribus.

SZECHUEN: Mount Omei at 4000 feet (*Faber*!). Herb. Kew.

Allied to the Indian *C. nervosum*, Benth., but insufficient for description.

1. **Echinospermum anisacanthum,** *Turcz. in Bull. Soc. Nat. Mosc.* 1838, vii. p. 97, absque descriptione; *DC. Prodr.* x. p. 143; *Turcz. Fl. Baic. Dahur.* ii. 2, p. 316; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475, et *in Mél. Biol.* viii. p. 552; *Franchet, Pl. David.* p. 215, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 238.

Echinospermum Lappula, *Debeaux, Fl. Tchef.* p. 101; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384, vix *Linn.*

CHIHLI: Jehol (*David*, 1828!); SHINGKING: Yungling and other localities (*Ross*! *Webster*!); SHANTUNG: Chefoo (*Perry*!). Mus. Brit.; Herb. Kew.

Siberia westward to Dahuria.

All the Chinese specimens we have seen belong to one species; but Maximowicz also records the common *E. Lappula* from North China. Perhaps it would be better to treat *E. anisacanthum*, Turcz., as a variety of *E. Lappula*, Linn.

1. **Eritrichium pectinatum,** *DC. Prodr.* x. p. 127; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475, et *in Mél. Biol.* viii. p. 546.

CHIHLI: grassy slopes of mountains near Peking at 7000 feet (*Hancock*!). Herb. Kew.

Siberia, Mongolia, Mandshuria, Kamtschatka.

1. **Microula tangutica,** *Maxim. in Mél. Biol.* x. p. 682.

KANSUH: alpine regions near springs (*Przewalski* ex *Maximowicz*).

1. **Tretocarya pratensis,** *Maxim. in Mél. Biol.* xi. p. 272.

KANSUH: western region at an altitude of 10,000 feet (*Przewalski* ex *Maximowicz*).

1. **Bothriospermum chinense,** *Bunge, Enum. Pl. Chin. Bor.* p. 47; *DC. Prodr.* x. p. 117; *Maxim. in Mél. Biol.* viii. p. 560; *Debeaux, Fl. Tientsin*, p. 32; *Franchet, Pl. David.* p. 216, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 238.

Bothriospermum bicarunculatum, *Fisch. et Mey. in Ind. Sem. Hort. Petrop.* 1835, p. 23, fide *Bunge in Del. Sem. Hort. Dorp.* 1840, p. 7, ex *DC.*

Bothriospermum bicarinatum, *Bunge* ex *Steud. Nomencl. Bot.*

CHIHLI: near Peking (*Bunge*! *Bretschneider*! *Bullock*! *Williams*!); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*). Mus. Brit.; Herb. Kew.

2. **Bothriospermum Kusnezowii,** *Bunge in Del. Sem. Hort. Dorp.* 1840, p. 7; *DC. Prodr.* x. p. 116; *Maxim. in Mél. Biol.* viii. p. 560; *Franchet, Pl. David.* p. 216; *Debeaux, Fl. Tchef.* p. 101.

Bothriospermum chinense, *Fisch. et Mey. in Ind. Sem. Hort. Petrop.* 1835, p. 23, non *Bunge.*

CHIHLI: Jehol (*David*, 1828!); SHANTUNG: Chefoo (*Perry*!); KIANGSU; Shanghai (*Maingay*!); HUPEH: Ichang (*A. Henry*, 773!). Mus. Brit.; Herb. Kew.

There are several immature specimens in the Kew Herbarium of this genus which we have not identified.

3. **Bothriospermum secundum,** *Maxim. Prim. Fl. Amur.* p. 202, et *in Mél. Biol.* viii. p. 560; *Franchet, Pl. David.* p. 216, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 238.

CHIHLI: near Peking (*Tatarinow* et *David* ex *Maximowicz* et *Franchet*); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*).

4. **Bothriospermum tenellum,** *Fisch. et Mey. in Ind. Sem. Hort. Petrop.* 1835, p. 24; *DC. Prodr.* x. p. 116; *Benth. Fl. Hongk.* p. 235; *Maxim. in Mél. Biol.* viii. p. 560; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 107.

Anchusa tenella, *Rœm. et Schult. Syst. Veg*. iv. p. 100.

Anchusa zeylanica, *Jacq. Eclog.* p. 47, t. 29.

Bothriospermum asperugoides, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 150.

CHINA: common from KIANGSU, HUPEH and SZECHUEN to FORMOSA, HONGKONG, and LUCHU ARCHIPELAGO (*Carles*! *Playfair*! *A. Henry*! *Oldham*! *Wright*! *Champion*! and many other collectors). Mus. Brit.; Herb. Kew.

Throughout North India, and also occurring in Mandshuria and Japan.

1. **Brachybotrys paridiformis,** *Maxim. in Hook. Ic. Pl.* xiii. p. 43, t. 1254; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385.

Lithospermearum genus novum, *Maxim. in Mél. Biol.* viii. p. 543.

SHINGKING: Chienshan and Kwandien (*Ross*!), Laoling (*Webster*!), Laoyehling and other hills near Moukden (*James*!). Herb. Kew.

Southern Mandshuria.

1. **Trigonotis brevipes,** *Maxim. in Mél. Biol.* xi. p. 273, in nota sub *T. petiolari.*

Eritrichium brevipes, *Maxim. in Mél. Biol.* viii. p. 547.

SZECHUEN: Mount Omei, at 4000 feet (*Faber*!). Herb. Kew.

Japan.

One of the Chinese specimens is about 15 inches high, with radical leaves 6 inches long, including the petiole, which about equals the blade. The blade of the largest leaf is 3½ inches long and 2 inches across. A second specimen from the same region is of about the same dimensions as the Japanese specimens in the Kew Herbarium. In a note attached to the

larger specimen the Rev. E. Faber states that it is used medicinally. The specific name refers to the pedicels.

3286 2. **Trigonotis mollis**, *Hemsl.*, n. sp.

Herba perennis ? undique molliter pilosa, multicaulis, caulibus gracillimis debilibus adscendentibus cum racemis terminalibus interdum fere pedalibus. *Folia* mollia, fere membranacea, graciliter petiolata, radicalia majora, ovato-orbicularia, absque petiolo sæpius bipollicaria, 6–9 lineas longa, caulina sursum gradatim minora (cum petiolo breviore), sæpissime suborbicularia. *Flores* pallide cærulei (*Henry*), 2–2½ lineas diametro, laxe longeque racemosi, graciliter pedicellati, inferiores axillares, racemis ebracteatis pedicellisque filiformibus, pedicellis quam flores 3–4plo longioribus ; calycis lobi obovato-spathulati, apice fere rotundati, demum leviter accrescentes, patentes ; corolla subrotata, tota glabra, tubo brevissimo, lobis fere orbicularibus, fauce fornicibus crassis carnosis reniformibus fere clausa ; stamina inclusa, glabra, antheris minutissime appendiculatis dorso medio affixis ; pistillum glabrum, stylo incluso. *Nuculæ* læves, glabræ, nitidæ, obpyramidatæ, brevissime stipitatæ, faciebus omnibus concavis, dorsali maxima.

HUPEH : Ichang, Fang, and Changyang (*A. Henry*, 630 A, 1574, 6735, 7796 !). Herb. Kew.

Evidently allied to *T. petiolaris*, Maxim., of which we have seen no authenticated specimen, but differing, according to the description, in the nature of the indumentum, in the shape of the leaves, in the size of the flowers, in the shape of the calyx-lobes, and in the relative lengths of the corolla-tube and lobes.

3. **Trigonotis peduncularis**, *Benth.* ex *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384.

Eritrichium pedunculare, *A. DC. Prodr.* x. p. 128 ; *Maxim. in Mél. Biol.* viii. p. 548 ; *Hance in Journ. Bot.* 1874, p. 261, et 1875, p. 134 ; *Debeaux, Fl. Tients.* p. 33, et *Fl. Shangh.* p. 44 ; *Franchet, Pl. David.* p. 215, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 238 ; *Ledeb. Fl. Ross.* iii. p. 153.

Myosotis chinensis, *A. DC. Prodr.* x. p. 106 ; *Black, Index Jap. Pl. in Bonplandia,* x. p. 94.

Eritrichium japonicum, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 96.

Myosotis peduncularis, *Trev. in Schrift. naturf. Ges. Berl.* vii. 1813, p. 147 ; *Bunge, Enum. Pl. Chin. Bor.* p. 47.

Myosotis pedunculata, *Rœm. et Schult. Syst. Veg.* iv. p. 104.

CHINA: common from CHIHLI and SHINGKING to HUPEH and KIANGSI, and in the LUCHU ARCHIPELAGO. Mus. Brit.; Herb. Kew.

Astrachan eastward to Mandshuria and Japan.

Var. **vestita,** *Hemsl.*; foliis dense albo-strigillosis.

SZECHUEN: North Wushan (*A. Henry*, 7072!). Herb. Kew.

4. **Trigonotis petiolaris,** *Maxim. in Mél. Biol.* xi. p. 272.

KANSUH: western alpine regions, common by rivulets (*Przewalski* ex *Maximowicz*).

1. **Lithospermum arvense,** *Linn. Sp. Pl.* ed. 1, p. 132; *DC. Prodr.* x. p. 74; *Maxim. in Mél. Biol.* viii. p. 541; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 174; *Franchet, Pl. David.* p. 214, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 238 (var. cærulescens).

SHANTUNG: Chefoo (*Perry*!); CHEKIANG: Ningpo (*Savatier* ex *Franchet*); HUPEH: Ichang (*A. Henry*!); SHENSI (*David* ex *Franchet*); COREAN ARCHIPELAGO: Port Hamilton and Peel Island (*Wilford,* 671! *Oldham,* 582!). Mus. Brit.; Herb. Kew.

Europe and North Africa to Mandshuria and Japan, and colonized in North America.

2. **Lithospermum chinense,** *Hook. et Arn. Bot. Beech. Voy.* p. 202; *DC. Prodr.* x. p. 80.

KWANGTUNG: Macao (*Vachell* ex *Hooker et Arnott*).

There is no specimen of this in the Hookerian herbarium at Kew, unless it has been removed to some other genus.

3. **Lithospermum officinale,** *Linn. Sp. Pl.* ed. 1, p. 132; *DC. Prodr.* x. p. 76; *Lour. Fl. Cochinch.* p. 103; *Maxim. in Mél. Biol.* viii. p. 541 (β. erythrorhizon); *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 175.

Lithospermum erythrorhizon, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 512; *Franchet, Pl. David.* p. 214, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 238.

CHIHLI: Jehol (*David* ex *Franchet*); SHINGKING: Peiling (*Webster*!), Talienhwan (*Birnie*!), between Moukden and Tungcheshien (*James*!); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*!) HUPEH: Ichang and immediate neighbourhood (*A. Henry*!);

COREA: Soul and Chemulpo (*Carles*!). Mus. Brit.; Herb. Kew.

Western Europe to Japan, if we include the typical *L. officinale*, Linn., the root of which also stains the herbarium paper sometimes, though not to the extent that the Chinese and Japanese plant does.

Dr. A. Henry states that the red root is used both as a dye and as a drug.

Loureiro (Fl. Cochinch. p. 103) records *Anchusa officinalis*, Linn., "in variis locis imperii Sinensis," and gives the same Chinese name for it that Dr. Henry does for the *Lithospermum officinale*, Linn. Bretschneider (Early Res. p. 163) states, too, that this name—"Tsu tsao"—is applied in Japan to *Lithospermum* and to a drug sold in Peking. It is probable, therefore, that *Anchusa* was a slip of the pen on the part of Loureiro.

4. **Lithospermum Zollingeri,** *A. DC. Prodr.* x. p. 587; *Hance in Journ. Bot.* 1878, p. 13; *Franchet, Pl. David.* p. 214, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 238; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 32.

Lithospermum japonicum, *A. Gray in Perry's Jap. Exped.* ii. p. 316; *S. Moore in Journ. Bot.* 1878, p. 138.

Lithospermum confertiflorum, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 95.

ANWHEI: Nanking (*Faber*!); CHEKIANG: Ningpo (*Everard*! *Hancock*!), Taihoo lake (*Carles*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); SHENSI (*David* ex *Franchet*); COREA: Port Chusan (*Wilford*, 715!); COREAN ARCHIPELAGO (*Wilford*!). Mus. Brit.; Herb. Kew.

Japan.

1. **Arnebia saxatilis,** *Benth. et Hook. f. Gen. Pl.* ii. p. 862.

Stenosolenium saxatile, *Turcz. in Bull. Soc. Nat. Mosc.* 1840, p. 253; *A. DC. Prodr.* x. p. 103; *Ledeb. Fl. Ross.* iii. p. 142; *Maxim. Ind. Pek. in Prim. Fl. Amur.* p. 475, et *in Mél. Biol.* viii. p. 545; *Franchet, Pl. David.* p. 214.

Lycopsis picta, *Bunge, Enum. Pl. Chin. Bor.* p. 47, non *Lehm.*, ex *Maxim.*

CHIHLI: near Peking (*Bretschneider*! *Bullock*! *Carles*! *Hancock*!). Mus. Brit.; Herb. Kew.

Siberia, in the Baical region.

93. CONVOLVULACEÆ.

1. **Erycibe obtusifolia,** *Benth. Fl. Hongk.* p. 236.

Erycibe glaucescens, *Hook. et Arn. Bot. Beech. Voy.* p. 201, non *Wall.*

South China: without locality (*Millett*! *Reeves*!); Hongkong (*Champion*! *Wilford*!). Mus. Brit.; Herb. Kew.

1. **Argyreia acuta,** *Lour. Fl. Cochinch.* p. 135; *Choisy in DC. Prodr.* ix. p. 333.

Argyreia festiva, *Wall. Pl. As. Rar.* i. p. 68, t. 76.

China: without locality (ex *Wallich*).

There is a specimen of a species of *Argyreia* in the British Museum from Chekiang, collected by Staunton, which we have not identified. It is doubtfully referred to *A. mollis,* Choisy.

[*Argyreia speciosa,* Sweet (Hort. Brit. ed. 2, p. 373), was collected by Colonel Urquhart in Hongkong, "on a bank by Heard's house."]

1. **Lettsomia Chalmersii,** *Hance in Journ. Bot.* 1878, p. 230.

Kwangtung: Tingushan (*Sampson,* hb. *Hance,* 1814!), without locality (*Ford*!). Mus. Brit.; Herb. Kew.

2. **Lettsomia Championi,** *Benth. et Hook. f. Gen. Pl.* ii. p. 869.

Argyreia Championi, *Benth. Fl. Hongk.* p. 236; *Henriques in Bol. Soc. Brot.* iii. p. 145.

Argyreia acuta, *Benth. in Hook. Kew Journ. Bot.* v. p. 57, an *Lour.*?

Kwangtung: Macao (*Silva* ex *Henriques*); Hongkong (*Wilford*! *Champion*!). Mus. Brit.; Herb. Kew.

This is so like the Indian *Argyreia obtecta,* Clarke (Fl. Brit. Ind. iv. p. 186), that we could believe them to be the same species.

1. **Ipomœa angustifolia,** *Jacq. Coll.* ii. p. 37, et *Ic. Pl. Rar.* t. 317; *Benth. Fl. Austral.* iv. p. 425; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 205; *Hance in Journ. Linn. Soc.* xiii. p. 113.

Ipomœa filicaulis, *Blume, Bijdr.* p. 721; *DC. Prodr.* ix. p. 353; *Benth. Fl. Hongk.* p. 238; *Henriques in Bol. Soc. Brot.* iii. p. 146.

Formosa: south-west side (*Wilford,* 487!); Kwangtung:

Macao (*Silva* ex *Henriques*); HONGKONG (*Hance*!); HAINAN (*Swinhoe*!). Mus. Brit.; Herb. Kew.

Generally spread in the tropics of the Old World.

[*Ipomœa Batatas*, Lam. (syn. *Convolvulus Batatas*, Linn.; *Batatas edulis*, Choisy), a native of America, is cultivated throughout China.—*Bretschn. Early Res.* p. 163; *Debeaux, Fl. Shangh.* p. 44; *Fl. Tchef.* p. 100; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 202. See note under *I. fastigiata*, Sweet.]

2. **Ipomœa aquatica,** *Forsk. Fl. Ægypt.-Arab.* p. 44; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 210; *Poir. in Lam. Encycl.* vi. p. 18.

Ipomœa reptans, *Poir. in Lam. Encycl., Suppl.* iii. p. 460; *Debeaux, Fl. Shangh.* p. 44; *Bretschn. Early Res.* pp. 117 et 163; *Maxim. in Mél. Biol.* xii. p. 496.

Convolvulus reptans, *Linn. Sp. Pl.* ed. 1, p. 158; *Lour. Fl. Cochinch.* p. 109.

Convolvulus repens, *Vahl, Enum. Pl.* i. p. 17.

Ipomœa repens, *Roth, Nov. Sp.* p. 110.

CHINA: cultivated throughout (*Bretschneider*! *A. Henry*! *Bourne*!), and perhaps also wild. Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, and Australia.

3. **Ipomœa biflora,** *Pers. Syn. Pl.* i. p. 183, non *R. Br.*; *Bretschn. Early Res.* p. 103.

Aniseia biflora, *Choisy in DC. Prodr.* ix. p. 431.

Convolvulus biflorus, *Linn. Sp. Pl.* ed. 2, p. 1668.

CHINA: without locality (ex *auct. var.*).

From the brief description this is probably *I. Hardwickii*, Hemsl., syn. *Aniseia calycina*, Choisy.

4. **Ipomœa biloba,** *Forsk. Fl. Ægypt.-Arab.* (1775), p. 44; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 212; *Hemsl. Bot. 'Challenger' Exped.* i. 1. p. 79, et 2. p. 169.

Ipomœa Pes-capræ, *Sweet, Hort. Suburb.* ed. 1 (1818), p. 35; *Roth, Nov. Sp. Pl.* (1821), p. 109; *DC. Prodr.* ix. p. 349; *Benth. Fl. Hongk.* p. 238; *Henriques in Bol. Soc. Brot.* iii. p. 146.

Ipomœa maritima, *R. Br. Prodr. Fl. Nov. Holl.* (1810), p. 486; *Bot. Reg.* t. 319.

FORMOSA: Tamsui (*Oldham*! *Hancock*!); PRATAS ISLAND

(*Wilford*!); KWANGTUNG: Macao (*Silva* ex *Henriques*); HAINAN: Hoihow (*Hancock*!). Mus. Brit.; Herb. Kew.

Sandy sea-shores, including the most remote islands throughout the tropics, and extending to some subtropical regions.

5. **Ipomœa Bona-nox,** *Linn. Sp. Pl.* ed. 2, p. 228; *Benth. Fl. Hongk.* p. 238; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 197; *Bot. Mag.* t. 752.

Calonyction speciosum, *α.* vulgare, *Choisy in DC. Prodr.* ix. p. 345.

HONGKONG (*Hance*! *Urquhart*!). Mus. Brit.; Herb. Kew.

Now generally spread over the tropics, but supposed to be a colonist in Asia.

6. **Ipomœa carnosa,** *R. Br. Prodr. Fl. Nov. Holl.* p. 485; *Benth. Fl. Austral.* iv. p. 420; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 213.

Batatas littoralis, *Choisy in DC. Prodr.* ix. p. 337.

Batatas acetosæfolia, *Choisy, loc. cit.* p. 338.

Ipomœa reptans, *Hook. et Arn. Bot. Beech. Voy.* p. 267, pro parte, non *Choisy.*

FORMOSA: Takow (*Playfair*!); KWANGTUNG: Pakhoi (*Playfair*!); LUCHU ARCHIPELAGO (*Beechey*!). Herb. Kew.

Sea-shores throughout the tropics and in some subtropical regions.

7. **Ipomœa chryseides,** *Ker in Bot. Reg.* t. 270; *DC. Prodr.* ix. p. 382; *Benth. Fl. Hongk.* p. 239; *Henriques in Bol. Soc. Brot.* iii. p. 146; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 206.

FORMOSA: Taiwan (*Playfair*!); KWANGTUNG: Whampoa (*Hance*, 3380!), Lantao island (*Ford*!); HONGKONG (*Hance* ex *Bentham*). Mus. Brit.; Herb. Kew.

Widely spread in the tropics of the Old World.

8. **Ipomœa congesta,** *R. Br. Prodr. Fl. Nov. Holl.* p. 485; *DC. Prodr.* ix. p. 369; *Benth. Fl. Austral.* iv. p. 417.

Pharbitis insularis, *Choisy in DC. Prodr.* ix. p. 341.

Ipomœa insularis, *Steud.* ex *Choisy, loc. cit.*; *Maxim. in Mél. Biol.* xii. p. 497.

FORMOSA (*Oldham*, 345! *Swinhoe*!); PRATAS ISLAND (*Wilford*!); LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

Japan, Australia, and Polynesia.

Hardly different from *I. hederacea*, Jacq. The specimens from Pratas Island are tomentose.

9. **Ipomœa cymosa,** *Rœm. et Schult. Syst. Veg.* iv. p. 241; *DC. Prodr.* ix. p. 371; *Benth. Fl. Hongk.* p. 238; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 211; *Bot. Reg.* 1843, t. 24; *Henriques in Bol. Soc. Brot.* iii. p. 146.

KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Hance*!). Mus. Brit.

Tropical Asia, Africa, and Australia.

10. **Ipomœa dasysperma,** *Jacq. Ecl.* i. p. 132, t. 89; *Choisy in DC. Prodr.* ix. p. 386; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 215.

Ipomœa tuberculata, *Bot. Reg.* t. 86, non *Rœm. et Schult.*

CHINA (ex *Choisy*).

India. Regarded by Mr. Clarke as probably a cultivated variety of *I. palmata.*

11. **Ipomœa digitata,** *Linn. Syst. Veg.* ed. 10, p. 924; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 202.

Ipomœa paniculata, *R. Br. Prodr. Fl. Nov. Holl.* p. 486; *Benth. Fl. Austral.* iv. p. 414; *Bot. Reg.* t. 62, non *Burm.*

Ipomœa insignis, *Andrews, Bot. Rep.* t. 636; *Hance in Journ. Linn. Soc.* xiii. p. 112; *Bot. Reg.* t. 75; *Bot. Mag.* t. 1790.

Ipomœa platensis, *Bot. Reg.* t. 333; *Bot. Mag.* t. 3685.

Batatas paniculata, *Choisy in DC. Prodr.* ix. p. 339.

KWANGTUNG: Island of Wongman (*Sampson*, hb. *Hance*, 580!); HONGKONG (*Hance*!). Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, America, Australia, and Polynesia.

12. **Ipomœa dissecta,** *Willd. Phytogr.* p. 5, t. 2. f. 3, et *Sp. Pl.* i. p. 880; *Choisy in DC. Prodr.* ix. p. 363; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 200; *Henriques in Bol. Soc. Brot.* iii. p. 145.

KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Urquhart*!). Herb. Kew.

Tropical Asia, Africa, and Australia.

13. **Ipomœa fastigiata,** *Sweet, Hort. Brit.* ed. 1, p. 288; *Meissn. in Fl. Bras.* vii. p. 267, cum synon.; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 209; *Miq. Fl. Ind. Bat.* ii. p. 616.

Convolvulus fastigiatus, *Roxb. Fl. Ind.* i. p. 468.

HUPEH: Changyang, cultivated (*A. Henry*!). Herb. Kew.

Also cultivated in India. A native of South America and the West Indies.

It appears to flower rarely in China, though Dr. Henry collected it in flower. He states that it is cultivated in Hupeh, at elevations of 500 to 3000 feet.

After we had identified the Chinese specimens with *I. fastigiata*, Sweet, Dr. Henry informed us that he regarded them as the common Sweet Potato (*Ipomœa Batatas*, Lam.), and this led to a comparison of the numerous American wild specimens of *I. fastigiata* with cultivated specimens of the Sweet Potato, with the result that we have no doubt of their specific identity.

2913 **14. Ipomœa Hardwickii**, *Hemsl.*

Ipomœa calycina, *Benth.* ex *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 201, non *Meissn. in Fl. Bras.* vii. p. 260.

Ipomœa sagittata, *Roxb. Ic. ined.* ex *Clarke*, non aliorum.

Ipomœa cardiosepala, *Hochst.* ex *Choisy*, non *Meissn. in Fl. Bras.* vii. p. 265.

Aniseia calycina, *Choisy in DC. Prodr.* ix. p. 429; *Wight, Ic. Pl. Ind. Or.* t. 833.

Convolvulus calycinus, *Roxb. Fl. Ind.* i. p. 471.

Convolvulus Hardwickii, *Spreng. Syst. Veg.* iv. 2, curæ posteriores, p. 60.

FORMOSA: south-west side (*Swinhoe*!), Apes Hill, Taiwan (*Playfair*!). Herb. Kew.

Tropical India and Africa.

15. **Ipomœa hederacea**, *Jacq. Collect.* i. p. 124, et *Ic. Pl. Rar.* i. t. 36; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 199; *Maxim. in Mél. Biol.* xii. p. 497; *Bot. Reg.* t. 85.

Ipomœa triloba, *Thunb. Fl. Jap.* p. 86, non *Linn.*

Pharbitis triloba, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 93; *Bretschn. Early Res.* p. 163.

Ipomœa cærulea, *Kœn.*; *Bot. Reg.* t. 276.

Ipomœa Nil *et* I. barbata, *Roth, Cat. Bot.* i. pp. 36 et 37.

Convolvulus Nil, *Linn.*; *Bot. Mag.* t. 188.

Pharbitis hederacea *et* P. Nil, *Choisy in DC. Prodr.* ix. pp. 343 et 344; *Franchet, Pl. David.* p. 217, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 237.

Pharbitis diversifolia, *Lindl. Bot. Reg.* t. 1988.

CHIHLI: hills near Peking (*Williams*! *Bretschneider*!); KIANGSU: Shanghai (*Faber*!); CHEKIANG: Ningpo mountains (*Faber*!); FORMOSA: west coast (*Wilford,* 501!), Tamsui (*Oldham,* 346!); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 1662, 4613 !); KWANGTUNG (*Ford* !); HONGKONG (*Urquhart* !). Mus. Brit.; Herb. Kew.

Tropical and subtropical regions of both hemispheres.

16. **Ipomœa muricata,** *Jacq. Hort. Schœnb.* iii. p. 40, t. 323, non *Cav.*; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 197.

Ipomœa Bona-nox, β. purpurascens, *Bot. Reg.* t. 290.

Calonyction speciosum, var. muricatum, *Choisy in DC. Prodr.* ix. p. 345, partim.

HUPEH: cultivated, and seeds eaten (*A. Henry* !). Herb. Kew.

India and Japan, and commonly cultivated.

17. **Ipomœa obscura,** *Ker in Bot. Reg.* t. 239; *DC. Prodr.* ix. p. 370; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 207; *Hance in Journ. Linn. Soc.* xiii. p. 113.

Convolvulus obscurus, *Linn. Sp. Pl.* ed. 2, p. 220; *Lour. Fl. Cochinch.* p. 107.

FORMOSA: south side (*Maries* !), Takow (*Playfair* !); HONGKONG (*Hance*). Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, and Australia.

[*Ipomœa palmata*, Forsk., syn. *I. tuberculata*, Rœm. et Schult., a very widely spread species, is recorded by Hance (Journ. Linn. Soc. xiii. p. 113) as having become common in Hongkong, though, as he believed, originally introduced; and Mr. Playfair has lately sent it from Formosa.]

18. **Ipomœa Pes-tigridis,** *Linn. Sp. Pl.* ed. 1, p. 162; *Choisy in DC. Prodr.* ix. p. 363; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 204, cum varietatibus; *Wight, Ic. Pl. Ind. Or.* t. 836.

Ipomœa hepaticifolia, *Linn. Sp. Pl.* ed. 1, p. 161; *DC. Prodr.* ix. p. 363.

Ipomœa capitellata, *Choisy in DC. Prodr.* ix. p. 365; *Hance in Journ. Bot.* 1885, p. 326.

FORMOSA: Takow and Taiwan (*Playfair* !); HAINAN (*B. C. Henry*, hb. *Hance* !). Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, and Polynesia.

19. **Ipomœa philippinensis,** *Choisy in Mém. Soc. Phys. Gen.* vi. p. 475, et *in DC. Prodr.* ix. p. 367.

CHINA: near Wangoo (*Robertson* !). Mus. Brit.

This is perhaps the same, at least as to the Chinese specimens, as *I. linifolia*, Blume.

Philippine Islands.

20. **Ipomœa pileata,** *Roxb. Fl. Ind.* i. p. 504; *Choisy in DC. Prodr.* ix. p. 365; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 203; *Hance in Journ. Bot.* 1885, p. 326.

Ipomœa involucrata, *Hance in Journ. Linn. Soc.* xiii. p. 113, nec *Beauv.*

HONGKONG (*Alabaster*!); HAINAN (*B. C. Henry*, hb. *Hance*!). Mus. Brit.

Widely spread in India eastward to Assam and Tenasserim, and extending to Ceylon.

[*Ipomœa purpurea*, Lam. (syn. *Pharbitis hispida*, Choisy), a native of tropical America, now widely colonized in other countries, is cultivated in China; and *Ipomœa Quamoclit*, Linn. (syn. *Quamoclit vulgaris*, Choisy), another American plant, is also commonly cultivated in China, and it is naturalized in Formosa.]

21. **Ipomœa pilosa,** *Sweet, Hort. Brit.* ed. 2, p. 372; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 213; *Henriques in Bol. Soc. Brot.* iii. p. 146.

KWANGTUNG: Macao (*Silva* ex *Henriques*).

India and tropical Africa.

22. **Ipomœa quinata,** *R. Br. Prodr. Fl. Nov. Holl.* p. 486; *Choisy in DC. Prodr.* ix. p. 385; *Benth. Fl. Hongk.* p. 237; *Henriques in Bol. Soc. Brot.* iii. p. 145; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 214.

Ipomœa pentadactylis, *Choisy in Mém. Soc. Phys. Gen.* vi. p. 471.

KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Champion*!). Mus. Brit.; Herb. Kew.

Eastern India to North Australia.

23. **Ipomœa sibirica,** *Pers. Syn. Pl.* i. p. 183; *Choisy in DC. Prodr.* ix. p. 377; *Ledeb. Fl. Ross.* iii. p. 87; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 33; *Franchet, Pl. David.* p. 217.

CHIHLI: at 3000 ft. on the mountains around Takiosze, not far from Peking (*Bretschneider*! hb. *Forbes*!), near Peking and Jehol (*David* ex *Franchet*).

Siberia and Mandshuria.

24. **Ipomœa sinensis,** *Choisy in Mém. Soc. Phys. Gen.* vi. p. 469, et *in DC. Prodr.* ix. p. 370; *Benth. Fl. Hongk.* p. 239; *Henriques, Bol. Soc. Brot.* iii. p. 146.

Convolvulus sinensis, *Desr. in Lam. Encycl.* iii. p. 557.

KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Hance*!). Mus. Brit.

This, we believe, will prove identical with *I. Hardwickii*, Hemsl.

[*Ipomœa sinensis*, Fisch. Hort. Gorenk. ed. 2, p. 28, is a doubtful plant known only by name to Choisy.]

[*Ipomœa sinuata*, Ortega, a tropical American species, is widely colonized in India, and also occurs in Southern China.]

[*Convolvulus tomentosus*, Lour. (Fl. Cochinch. p. 108), vix Linn., is perhaps the same as *Ipomœa hederacea*, Jacq., or *I. congesta*, R. Br.]

25. **Ipomœa Turpethum,** *R. Br. Prodr. Fl. Nov. Holl.* p. 485; *DC. Prodr.* ix. p. 360; *Hance in Journ. Bot.* 1878, p. 13; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 212; *Bot. Reg.* t. 279.

Convolvulus Turpethum, *Linn. Sp. Pl.* ed. 1, p. 135; *Bot. Mag.* t. 2093.

Ipomœa anceps, *Rœm. et Schult. Syst. Veg.* iv. p. 231; *Henriques in Bol. Soc. Brot.* iii. p. 212.

FORMOSA: south-west (*Swinhoe*!), Taiwan (*Playfair*!); KWANGTUNG: Whampoa (*Hance*!). Mus. Brit.; Herb. Kew.

Tropical Asia, Mascarene islands, Polynesia, and Australia.

26. **Ipomœa,** sp. n.? *I. coccinea* simillima sed sepalis puberulis exapiculatis.

SZECHUEN: Wushan gorge (*Faber*, 1199!). Herb. Kew.

Too young for description.

1. **Hewittia bicolor,** *Wight, Ic. Pl. Ind. Or.* t. 835; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 216; *Hance in Journ. Bot.* 1878, p. 231.

Convolvulus involucratus, *Ker in Bot. Reg.* t. 318, non *Spreng.*

Shuteria bicolor, *Choisy in DC. Prodr.* ix. p. 435.

HAINAN (*Bullock*, hb. *Hance*!). Mus. Brit.

Tropical Asia and Africa.

1. **Calystegia dahurica,** *Choisy in DC. Prodr.* ix. p. 433, cum varietatibus β et γ; *Debeaux, Fl. Tchef.* p. 99; *Maxim. Prim. Fl. Amur.* p. 474.

Convolvulus dahuricus, *Sims in Bot. Mag.* t. 2609; *Franchet, Pl. David.* p. 219, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 237.

Convolvulus subvolubilis *et* C. pellita, *Ledeb. Fl. Alt.* i. pp. 222, 223, et *Ic. Pl. Fl. Ross.* tt. 205, 206; *Bunge, Enum. Pl. Chin. Bor.* p. 46.

Calystegia subvolubilis *et* C. pellita, *Ledeb. Fl. Ross.* iii. pp. 94, 95.

CHIHLI: near Peking (*Bunge*!), Jehol (*David*, 1851!); SHINGKING: Teiling (*Webster*!); SHANTUNG: Chefoo (*Perry*! *Forbes*!); COREA: Chemulpo (*Carles*!). Mus. Brit.; Herb. Kew.

Siberia and Mandshuria.

2. **Calystegia hederacea,** *Wall. in Roxb. Fl. Ind. ed. Carey et Wall.* ii. p. 94; *DC. Prodr.* ix. p. 434; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 217.

Convolvulus acetosæfolius, *Turcz. in Bull. Soc. Nat. Mosc.* 1840, p. 73.

Calystegia acetosæfolia, *Turcz. Fl. Baical-Dahur.* ii. 2. p. 289; *Maxim. Prim. Fl. Amur.* p. 474; *Hance in Ann. Sc. Nat.* 5me série, v. p. 230; *Debeaux, Fl. Tients.* p. 31; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384.

Calystegia pubescens, *Lindl. in Journ. Hort. Soc.* i. p. 70, et *Bot. Reg.* 1846, t. 42; *Walp. Rep.* vi. p. 541; *Ann. Gand.* ii. p. 407, t. 93, et *Fl. des Serres*, t. 172, ic. *Bot. Reg.* iterata.

CHIHLI: near Peking (*Swinhoe*, hb. *Hance*, 6507!); SHINGKING: Moukden (*Webster*!), Sarhoo (*Ross*!); KIANGSU: Shanghai (*Carles*!); CHEKIANG: Ningpo (*Faber*!); HUPEH: Ichang (*Henry*!); COREA: west coast (*Carles*!). Mus. Brit.; Herb. Kew.

Afghanistan to Mandshuria and Japan.

3. **Calystegia Sepium,** *R. Br. Prodr. Fl. Nov. Holl.* p. 483; *Choisy in DC. Prodr.* ix. p. 433.

Convolvulus Sepium, *Linn. Sp. Pl.* ed. 1, p. 153; *Franchet, Pl. David.* p. 218 (var. brevipes); *Bot. Mag.* t. 732, β. americanus.

CHIHLI: near Peking (*Bullock*! *Bretschneider*!); SHINGKING: Chienshan (*Ross*!); hills near Moukden (*James*!); HUPEH: Ichang, Patung and neighbourhood (*A. Henry*!); SZECHUEN: Mount Omei (*Faber*!); COREA: Chemulpo (*Carles*!). Mus. Brit.; Herb. Kew.

North temperate and subtropical regions, Australia, and New Zealand.

4. **Calystegia Soldanella,** *R. Br. Prodr. Fl. Nov. Holl.* p. 483; *Choisy in DC. Prodr.* ix. p. 433.

Convolvulus Soldanella, *Linn. Sp. Pl.* ed. 1, p. 159; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 237; *Benth. Fl. Austral.* iv. p. 431.

SHANTUNG: Chefoo (*Perry* !); COREA: Chemulpo (*Carles* !); COREAN ARCHIPELAGO: Port Hamilton (*Oldham,* 570 !); LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit.; Herb. Kew.

Widely spread on the sea-shores of the temperate regions of both hemispheres.

1. **Convolvulus Ammannii,** *Desr. in Lam. Encycl.* iii. p. 549; *DC. Prodr.* ix. p. 402; *Ledeb. Fl. Ross.* iii. p. 90; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Hance in Journ. Bot.* 1869, p. 166, et 1882, p. 292; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.* p. 9.

CHIHLI: on the borders of Shansi (*Pierson,* hb. *Hance* !), Kalgan (*Williams,* hb. *Hance* !); KANSUH (ex *Kanitz*). Mus. Brit.

Southern Russia, Siberia, Mongolia, and Mandshuria.

2. **Convolvulus arvensis,** *Linn. Sp. Pl.* ed. 1, p. 153; *DC. Prodr.* ix. p. 406; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474; *Franchet, Pl. David.* p. 118 (var. angustatus, *Ledeb. Fl. Alt.* i. p. 224); *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 384; *Debeaux, Fl. Tchef.* p. 98 (var. insignis); *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 237 (var. sagittæfolius, *Fisch. Cat. Hort. Gorenk.* 1810, p. 28); *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 219.

Convolvulus chinensis, *Ker, Bot. Reg.* t. 322.

CHINA: common in the north (*Staunton* ! *Williams* ! *Bushell* ! *Hancock* ! *Ross* !). Mus. Brit.; Herb. Kew.

Very widely diffused in temperate and subtropical regions.

[*Convolvulus bryoniæfolius,* Willd. (Bot. Mag. t. 943), syn. *C. althæoides,* Linn., a native of the Mediterranean region, is recorded from China in the 'Botanical Magazine,' but doubtless through some error.]

3. **Convolvulus calystegoides,** *Choisy in DC. Prodr.* ix. p. 413; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 237.

CHINA: without locality (*Staunton*!); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*). Mus. Brit.

This is apparently the same as *Calystegia hederacea*, Wall., but without actual comparison we do not venture to reduce it.

4. **Convolvulus parviflorus**, *Vahl, Symb.* iii. p. 29; *DC. Prodr.* ix. p. 413; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 220.

Jacquemontia violacea, *Benth. Fl. Hongk.* p. 239, vix *Choisy*.

Convolvulus ianthinus, *Hance in Walp. Ann.* iii. p. 113.

FORMOSA: south-west coast (*Swinhoe*!); Taiwan (*Playfair*!); HONGKONG (*Champion*! *Tate*!). Mus. Brit.; Herb. Kew.

Tropical Asia and Australia.

The Chinese plant appears to vary in colour from white and pink to violet.

5. **Convolvulus tragacanthoides**, *Turcz. in Bull. Soc. Nat. Mosc.* 1832, p. 22; *DC. Prodr.* ix. p. 400; *Hance in Journ. Bot.* 1869, p. 166.

Convolvulus spinosus, *Bunge, Enum. Pl. Chin. Bor.* p. 47, et *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 474, nec alior.

CHIHLI: near Zsimini (ex *Bunge*), Kalgan (*Williams*, hb. *Hance*!). Mus. Brit.

Mongolia.

1. **Evolvulus alsinoides**, *Linn. Sp. Pl.* ed. 2, p. 392; *DC. Prodr.* ix. p. 447; *Benth. Fl. Hongk.* p. 240; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 220.

Evolvulus chinensis, *Choisy in DC. Prodr.* ix. p. 447.

Evolvulus pudicus, *Hance in Walp. Ann.* iii. p. 115.

Evolvulus linifolius, *Linn. Sp. Pl.* ed. 2, p. 392.

Evolvulus hirsutus, *Lam. Encycl.* iii. p. 538, et *Illustr.* t. 216.

Evolvulus sinicus, *Miq. Journ. de Bot. Néerl.* i. p. 112?

CENTRAL and SOUTHERN CHINA and FORMOSA: common (*Swinhoe*! *Playfair*! *Wright*! *A. Henry*! and other collectors). Mus. Brit.; Herb. Kew.

Generally spread in tropical and subtropical countries.

1. **Porana racemosa**, *Roxb. Fl. Ind.* i. p. 466; *DC. Prodr.* ix. p. 436; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 222; *Wight, Ill. Ind. Bot.* t. 168 *bis*, et *Ic. Pl. Ind. Or.* t. 1376; *Jacq. f. Eclog.* ii. t. 165.

Dinetus racemosus, *Sweet, Brit. Fl. Gard.* t. 127.

CHEKIANG: Ningpo mountains (*Faber* !); HUPEH: Ichang and immediate neighbourhood and Nanto and mountains to the northward (*A. Henry* !). Herb. Kew.

North-western Himalaya to Khasia, Burma, and Martaban.

2225 2. **Porana sinensis,** *Hemsl.*, n. sp.

Frutex volubilis tota pubescens, ramulis floriferis crassiusculis teretibus. *Folia* graciliter petiolata, papyracea, mollia, late cordiformia, absque petiolo 2–4 poll. longa, acute abrupteque acuminata, utrinque pubescentia, venis primariis paucis inconspicuis; petiolus teres, gracilis, 9–18 lineas longus. *Flores* pallide cærulei (*Ford*), circiter pollicem diametro, densiuscule fasciculatim racemosi, basi 2–3 bracteolati, racemis solitariis axillaribus folia excedentibus interdum fere pedalibus ebracteatis, pedicellis quam flores brevioribus; sepala tomentosa, valde inæqualia, 2 longiora oblonga, obtusa, 3 breviora ovato-acuminata; corolla late infundibularis, tubo brevi extus pubescens; stamina subæqualia, glabra, corolla breviora, filamentis filiformibus antheris versatilibus; ovarium supra medium pilosum, 1-loculare, 4-ovulatum, stylo basi sursum usque medio piloso, stigmate capitato. *Fructus* ignotus.

KWANGTUNG: without locality (*Ford*, 290 !). Herb. Kew.

Nearest to *P. spectabilis*, Kurz, which has narrower, more conspicuously-veined leaves, and flowers twice the size.

1. **Dichondra repens,** *Forst. Char. Gen. Pl.* p. 39, t. 20; *DC. Prodr.* ix. p. 451; *Benth. Fl. Hongk.* p. 240.

FORMOSA (*Oldham* ! *Swinhoe* !); SZECHUEN (*Bourne* !); HONGKONG (*Hance* !); LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit.; Herb. Kew.

Very widely spread in tropical and subtropical regions of both hemispheres.

1. **Cuscuta chinensis,** *Lam. Encycl.* ii. p. 229; *Choisy in DC. Prodr.* ix. p. 457; *Engelm. in Trans. Acad. Sc. St. Louis*, i. p. 479; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 226; *Hance in Journ. Linn. Soc.* xiii. p. 83; *Franchet, Pl. David.* p. 219, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 237; *Debeaux, Fl. Tchef.* p. 99.

Cuscuta hyalina, *Wight, Ic. Pl. Ind. Or.* t. 1372, non *Roth.*

Cuscuta fimbriata, *Bunge manuscript* fide *Engelm.*; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475.

CHIHLI: near Peking (*Bushell*! *Bretschneider*! *Lady Alcock*!); SHANTUNG: Chefoo (*Forbes*!); SZECHUEN: Chungching (*Bourne*!); KWANGTUNG: near Canton (*Hance*, 10514!). Mus. Brit.; Herb. Kew.

Persia and Afghanistan eastward to Japan, and southward to Ceylon and Australia.

2. **Cuscuta Grasii,** *Delponte in Mem. Accad. Sc. Torino*, serie 2, xxvi. p. 132, t. 2; *Nuov. Giorn. Bot. Ital.* iii. p. 96.

HONGKONG (*De Filippi* ex *Delponte*).

We have not seen the description of this, and only take the name up from the Journal cited.

3. **Cuscuta japonica,** *Choisy in Zoll. Syst. Verzeichn. Ind. Arch. Pfl.* p. 134; *Engelm. in Trans. Acad. Sc. St. Louis*, i. p. 517, cum varietatibus; *Benth. Fl. Hongk.* p. 241.

Cuscuta colorans, *Maxim. Prim. Fl. Amur.* p. 201; *Franchet, Pl. David.* p. 219; *Engelm. loc. cit.* var. β. paniculata.

CHIHLI: near Peking (*Bushell*! *Lady Alcock*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Patung district and Nanto and mountains to the northward (*A. Henry*!); HONGKONG (*Wright*! *Champion*! *Urquhart*!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

4. **Cuscuta lupuliformis,** *Krock. Fl. Siles.* i. p. 261, t. 36; *Engelm. in Trans. Acad. Sc. St. Louis*, i. p. 516 (var. β. asiatica); *Franchet, Pl. David.* p. 219.

Cuscuta monogyna, *Vahl, Symb.* ii. p. 32; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Bunge, Enum. Pl. Chin. Bor.* p. 47.

CHIHLI: near Peking (ex *Maximowicz* et *Franchet*).

Europe and North Asia.

[*Cuscuta Millettii*, Hook. et Arn. (Bot. Beech. Voy. p. 201), recorded from Canton, is referred by Engelmann to the widely-spread *C. obtusiflora*, H. B. K.; but there is no specimen in the Kew Herbarium; therefore we are unable to do more than take up the name.]

5. **Cuscuta pedicellata,** *Ledeb. Fl. Alt.* i. p. 293, t. 234; *Engelm. in Trans. Acad. Sc. St. Louis,* i. p. 472; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475.

CHIHLI: near Peking (ex *Maximowicz*).

Siberia.

94. SOLANACEÆ*.

1. **Solanum biflorum,** *Lour. Fl. Cochinch.* (1790), p. 129; *Choisy in DC. Prodr.* xiii. 1. p. 178; *Hook. et Arn. Bot. Beech. Voy.* p. 267; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 118; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 232; *Hance in Journ. Linn. Soc.* xiii. p. 114.

Solanum decemdentatum, *Roxb. Fl. Ind.* ii. (1824), p. 247; *Benth. Fl. Hongk.* p. 242; *Choisy in DC. Prodr.* xiii. 1. p. 179.

Solanum Osbeckii, *Choisy in DC. Prodr.* xiii. 1. p. 179.

Solanum Calleryanum, *Choisy in DC. Prodr.* xiii. 1. p. 178.

FORMOSA: without locality (*Oldham,* 337!), Kelung (*Ford!*); HUPEH: Ichang and the immediate neighbourhood (*A. Henry!*); KWANGTUNG: Lofaushan and other localities (*Ford!*); HONGKONG (*Champion!*); LUCHU ARCHIPELAGO (*Beechey! Wright!*). Mus. Brit.; Herb. Kew.

Malay peninsula and archipelago.

2. **Solanum Dulcamara,** *Linn. Sp. Pl.* ed. 1, p. 185; *DC. Prodr.* xiii. 1. p. 78; *Boiss. Fl. Or.* iv. p. 285; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 229; *Hance in Journ. Linn. Soc.* xiii. p. 84; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 239 (var. chinensis, *Dunal*).

Solanum lyratum, *Thunb. Fl. Jap.* p. 92; *Dunal in DC. Prodr.* xiii. 1. p. 79.

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* Several exotic members of this order are cultivated and more or less naturalized in China; among them the tomato, *Lycospersicum esculentum,* Mill.; Cayenne pepper, *Capsicum frutescens,* Linn., *C. baccatum,* Linn., and *C. annuum,* Linn.; the Cape gooseberry, *Physalis peruviana,* Linn.; the egg-plant, *Solanum Melongena,* Linn., syn. *S. esculentum,* Dunal; and tobacco, *Nicotiana Tabacum,* Linn., and *N. rustica,* Linn. See Bretschneider's 'Early European Researches into the Flora of China,' p. 164, and DeCandolle, 'Origine des Plantes Cultivées,' éd. 3, pp. 111, 229, and 230. *Capsicum sinense,* Jacq. (Hort. Vindob. iii. t. 67), *Nicotiana chinensis,* Fisch. (Linnæa, xiv. Literaturbl. p. 160), and *Solanum æthiopicum, β. violaceum,* Dunal (DC. Prodr. xiii. 1. p. 351), were all founded on cultivated plants.

Solanum persicum, *Willd. in Rœm. et Schult. Syst. Veg.* iv. p. 662; *Hance in Journ. Linn. Soc.* xiii. p. 84.

Solanum dichotomum, *Lour. Fl. Cochinch.* p. 129; *DC. Prodr.* xiii. 1. p. 122?

CHIHLI to HUPEH, YUNNAN, KWANGTUNG, and FORMOSA! apparently common. Mus. Brit.; Herb. Kew.

Western Europe and North Africa to Mandshuria and Japan.

Most of the Chinese specimens are of the variety named *lyratum* by Thunberg.

3. **Solanum ferox,** *Linn. Sp. Pl.* ed. 2, p. 267; *DC. Prodr.* xiii. 1. p. 255; *Benth. Fl. Hongk.* p. 243 (excl. S. involucratum, *Blume*); *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 233; *Wight, Ic. Pl. Ind. Or.* t. 1399.

Solanum lasiocarpum, *Dunal in DC. Prodr.* xiii. 1. p. 252, β. velutinum.

Solanum immane, *Hance in Walp. Ann.* iii. p. 165.

HONGKONG (*Hinds*! *Wright*!); KWANGTUNG: Macao (*Callery* ex *Dunal*); HAINAN (*B. C. Henry*!). Mus. Brit.; Herb. Kew.

Tropical India and Malaya.

4. **Solanum hainanense,** *Hance in Journ. Bot.* 1868, p. 331.

KWANGTUNG: Pakhoi (*Perry*! *Playfair*!); HAINAN: near Kiengchaufu (*Sampson* and *Hance*, 13816!). Mus. Brit.; Herb. Kew.

Turong, in Anam.

5. **Solanum incanum,** *Linn. Sp. Pl.* ed. 1, p. 188; *Dunal in DC. Prodr.* xiii. 1. p. 368.

Solanum sanctum, *Linn. Sp. Pl.* ed. 2, p. 269; *Benth. Fl. Hongk.* p. 243.

Solanum coagulans, *Forsk. Fl. Ægypt.-Arab.* p. 47; *Dunal in DC. Prodr.* xiii. 1. p. 369; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 236; *Delile, Fl. Ægypt.* t. 23. fig. 1.

FORMOSA (*Oldham*!); KWANGTUNG: Pakhoi (*Playfair*!); HONGKONG (*Wilford*!). Mus. Brit.; Herb. Kew.

Egypt and Arabia eastward.

6. **Solanum indicum,** *Linn. Sp. Pl.* ed. 1, p. 187, partim; *DC. Prodr.* xiii. 1. p. 309; *Benth. Fl. Hongk.* p. 242; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 234; *Wight, Ic. Pl. Ind. Or.* t. 346.

Solanum violaceum, *Ortega ex Jacq. Fragm.* p. 82, t. 132. fig. 1, nec *R. Br.*

Solanum chinense, *Dunal in DC. Prodr.* xiii. 1. p. 373.

Solanum incanum chinense minus spinosum, etc., *Plukenet, Phytogr.* t. 62. fig. 1.

Formosa (*Oldham*, 338! *Playfair*!); Szechuen: Fu city (*Faber*!); Kwangtung (*Hance*! *Perry*! *Ford*; *Wilford*!). Mus. Brit.; Herb. Kew.

Throughout tropical India and Malaya.

Mr. Playfair sends a variety from Formosa, with distinctly racemose flowers.

7. **Solanum lysimachioides,** *Wall. Cat.* 2609; *Roxb. Fl. Ind* ii. p. 259, excl. S. biflora, *Lour.*; *Nees in Trans. Linn. Soc.* xvii. p. 44; *Dunal in DC. Prodr.* xiii. 1. p. 181.

Hupeh: Ichang, Patung, Fang, and other localities (*A. Henry*!); Szechuen: Mount Omei, 3500 to 9000 feet (*Faber*!), South Wushu (*A. Henry*!). Herb. Kew.

North India, from Kumaon eastward.

8. **Solanum nigrum,** *Linn. Sp. Pl.* ed. 1, p. 186; *DC. Prodr.* xiii. 1. p. 50; *Benth. Fl. Hongk.* p. 242; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Franchet, Pl. David.* p. 220, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 239; *Debeaux, Fl. Tients.* p. 33; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 229, cum synon.

Solanum nodiflorum, *Jacq. Ic. Pl. Rar.* ii. t. 326; *DC. Prodr.* xiii. 1. p. 46.

China: common throughout! Mus. Brit.; Herb. Kew.

Generally diffused in temperate and tropical regions.

420 9. **Solanum pittosporifolium,** *Hemsl.*, n. sp.

Frutex inermis, undique glaber, ramulis floriferis gracilibus angulatis. *Folia* petiolata, subcoriacea, oblongo-lanceolata, cum petiolo 2–3 poll. longa, acuminata vix acuta, basi sæpius cuneata, interdum leviter obliqua, margine undulata, venis primariis lateralibus utrinque 6–7 inter se anastomosantibus inconspicuis; petiolus gracilis, circiter semipollicaris. *Flores* parvi (4–5 lineas diametro), pauci in cymas graciles laterales et subterminales foliis breviores dispositi, cymæ ebracteatæ ramulis filiformibus, pedicellis juxta flores incrassatis; calycis cupularis lobi brevissimi, rotundati; corollæ crassæ breviter infundibularis lobi oblongi,

medio 1-costati, margine puberuli, apice incurvi; stamina supra medium tubi brevi affixa, quam corolla breviora, filamentis brevissimis, antheris amplis; stylus breviter exsertus. *Fructus* ignotus.

SZECHUEN: mount Omei, at 5000 feet (*Faber*!).

Very distinct in foliage and inflorescence from all other Asiatic species.

10. **Solanum septemlobum,** *Bunge, Enum. Pl. Chin. Bor.* p. 48; *Dunal in DC. Prodr.* xiii. 1. p. 71; *Hance in Journ. Bot.* 1883, p. 324; *Franchet, Pl. David.* p. 220; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.* p. 9.

CHIHLI: near Peking (*Bushell*! *Bretschneider*!); SHINGKING: Peiling (*Webster*!); KANSUH (ex *Kanitz*). Mus. Brit; Herb. Kew.

Mongolia and Mandshuria.

11. **Solanum torvum,** *Swartz, Prodr. Fl. Ind. Occ.* p. 47; *Dunal, Sol.* p. 203, t. 23, et *in DC. Prodr.* xiii. 1. p. 260.

Solanum macaonense, *Dunal in DC. Prodr.* xiii. 1. p. 264?

FORMOSA (*Oldham*, 342!); KWANGTUNG (*Millett*! *Wenyon*!); Hainan (*B. C. Henry*!). Mus. Brit.; Herb. Kew.

Tropical Asia and America.

12. **Solanum verbascifolium,** *Linn. Sp. Pl.* ed. 1, p. 184; *Dunal in DC. Prodr.* xiii. 1. p. 114; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 230; *Jacq. Hort. Vindob.* i. t. 13.

FOKIEN: Amoy (*Hance*, 1419!); FORMOSA: without locality (*Oldham*, 341!), Takow (*Playfair*!); KWANGTUNG (*Tate*!). Mus. Brit.; Herb. Kew.

Tropical Asia, America, and Australia.

[*Solanum Wrightii*, Benth. (Fl. Hongk. p. 243), as Hance pointed out (Journ. Linn. Soc. xiii. p. 114), is certainly not a native of Hongkong; and we have succeeded in tracing it to South America. It appears to have been long cultivated in eastern countries; and it is figured (Revue Horticole, 1867, p. 132) under the name of *S. macranthum*, Hort.; but it is not *S. macranthum*, Dunal, nor is it the species figured in the 'Botanical Magazine' (t. 4138) under that name. The last is *S. maroniense*, Poiteau. So far as our researches go, Bentham was the first to describe the species, and from Hongkong specimens. It is, however, undoubtedly a native of South America; for we find specimens in the Kew Herbarium collected by Mr. Pearce in woods on the banks of the Amantala, at 4000 to 5000 feet. See also Hemsley in 'Gard. Chron.' 3rd series, vi. (1889) pp. 75 and 81, fig. 13.]

13. **Solanum xanthocarpum,** *Schrad. et Wendl. Sert. Hanov.* i. p. 8, t. 2; *Dunal in DC. Prodr.* xiii. 1. p. 302; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 236.

SZECHUEN: Yungyang (*Faber!*). Herb. Kew.

Tropical Asia, Australia, and Polynesia.

1. **Physalis Alkekengi,** *Linn. Sp. Pl.* ed. 1, p. 183; *DC. Prodr.* xiii. 1. p. 438; *Lour. Fl. Cochinch.* p. 133; *Franchet, Pl. David.* p. 220, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 239; *Debeaux, Fl. Tients.* p. 34.

CHIHLI, SHINGKING, SHANTUNG, KIANGSU, COREA, and HUPEH: apparently common (*Oldham! Carles! Ross! Wilford!* and other collectors). Mus. Brit.; Herb. Kew.

Western Europe through Central Asia to Japan, but often cultivated.

Dr. A. Henry collected specimens with flowers about half the ordinary size.

2. **Physalis ciliata,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 22; *DC. Prodr.* xiii. 1. p. 448; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 454.

KIANGSU (*Poli* ex *Franchet* in litt.).

Japan.

3. **Physalis angulata,** *Linn. Sp. Pl.* ed. 1, p. 183; *DC. Prodr.* xiii. p. 448; *Benth. Fl. Hongk.* p. 244.

HONGKONG (*Champion!*); FORMOSA (*Wilford! Playfair!*). Mus. Brit.; Herb. Kew.

Very widely spread.

We have referred the glabrous specimens to this species and the hairy ones to *P. minima,* Linn.; but we must confess that we do not understand the limits of these species.

4. **Physalis minima**, *Linn. Sp. Pl.* ed. 1, p. 183 ? ; *DC. Prodr.* xiii. 1. p. 445 ; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 228.

CHINA : various localities. Herb. Kew.

Very widely spread.

In addition to the specimens included under the foregoing names, there is a specimen in the Kew Herbarium from the Luchu Archipelago named *Physalis pubescens*, Linn., an American species ; and there is, further, a flowering specimen of what may belong to this genus from near Moukden, Shingking.

4714 1. **Chamæsaracha ? heterophylla**, *Hemsl.*, n. sp.

Herba erecta, sesquipedalis, parcissime puberula, furcato-ramosa, ramulis angulatis. *Folia* alterna (interdum suppressione internodorum ad apices ramulorum binata vel ternata simul valde inæqualia), petiolata, membranacea, ovato-lanceolata, basi sæpius plus minusve obliqua, subacuta, 1–6 poll. longa, utrinque parce puberula, venis primariis utrinque circiter 5 inconspicuis. *Flores* axillares, solitarii, breviter pedunculati; calyx florifer furfurascens, 4–5 lineas longus, 5-lobatus, lobis erectis subobtusis ; calyx fructifer valde accrescens, baccam arcte omninoque vestiens, 6–7 lineas diametro. *Bacca* polysperma; semina pallida, discoidea, rugulosa.

HUPEH : Fang (*A. Henry* !). Herb. Kew.

Very near *C. japonica*, Franch. et Savat., differing in being wholly glabrous, more slender in habit, and in the berries being entirely enclosed in the calyx.

Chamæsaracha should, perhaps, be treated as a section of *Physalis*.

2. **Chamæsaracha sinensis**, *Hemsl.*, n. sp.

Herba tota glaberrima, ramulis gracilibus teretibus stramineis. *Folia* membranacea, longissime petiolata, ovato-lanceolata, acuta, cum petiolo gracili usque ad 5 poll. longa, integra. *Flores* . . . . . . *Baccæ* 2–3 aggregatæ, axillares, graciliter pedunculatæ, globosæ, circiter 6 lineas diametro, calycibus membranaceis fere scariosis omnino inclusæ ; semina pallida, discoidea, obscure reticulata.

HUPEH : Ichang and immediate neighbourhood (*A. Henry*, 2902 !). Herb. Kew.

[*Nicandra physaloides*, Gærtn. (Fl. Hongk. p. 244), a native of South America, is colonized in Hongkong.]

1. **Lycium chinense,** *Mill. Gard. Dict.* ed. 8, n. 5; *DC. Prodr.* xiii. 1. p. 510; *Benth. Fl. Hongk.* p. 244; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Walp. Rep.* iii. p. 107; *Debeaux, Fl. Tients.* p. 33, *Fl. Shangh.* p. 45, et *Fl. Tchef.* p. 101; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 238; *Nouv. Duham.* i. p. 116, t. 30; *Hook. et Arn. Bot. Beech. Voy.* p. 267.

Lycium barbarum, β. chinense, *Ait. Hort. Kew.* ed. 1, i. p. 257.

Lycium megistocarpum, *Dunal in DC. Prodr.* xiii. 1. p. 510.

Lycium ovatum, *Loisel. in Nouv. Duham.* i. p. 117.

Lycium Trewianum, *G. Don, Gen. Syst.* iv. p. 458; *Walp. Rep.* iii. p. 107.

Lycium barbarum, *Linn.*; *Bretschn. Early Res.* p. 104.

Lycium turbinatum, *Loisel. in Nouv. Duham.* i. p. 119, t. 31; *Walp. Rep.* iii. p. 107.

CHINA: without locality (*Fortune*, 48, 57!); CHIHLI: near Peking (*Bretschneider*! *Bushell*!); SHANTUNG: Chefoo (*Farbes*!); KIANGSU: Shanghai (*Maingay*! *Carles*!); FOKIEN: Amoy (*Hance*, 646!); CHEKIANG: Chusan (*Cantor*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); SZECHUEN: above Chungking (*Faber*!); KWANGTUNG: Pakhoi (*Playfair*!); LUCHU ARCHIPELAGO (*Beechey*!). Mus. Brit.; Herb. Kew.

Japan.

Commonly known in English gardens as tea-tree, and sometimes called Lord Macartney's tea. Miller states (*loc. cit.*) that some persons thought it was the true tea when it was first introduced.

1. **Mandragora caulescens,** *Clarke? in Hook. f. Fl. Brit. Ind.* iv. p. 242; *Franchet in Bull. Soc. Bot. France*, xxxii. p. 26.

YUNNAN: Koualapo mountains between Hokin and Tali (*Delavay* ex *Franchet*).

1. **Datura alba,** *Nees in Trans. Linn. Soc.* xvii. p. 73; *DC. Prodr.* xiii. 1. p. 541; *Benth. Fl. Hongk.* p. 245.

Datura fastuosa, *Linn.*, var. alba, *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 243.

SOUTH CHINA and FORMOSA (*Wilford*! *Oldham*! and others).

Cultivated at Peking (*Bretschneider* !). Mus. Brit.; Herb. Kew.

Widely spread in Asia.

2. **Datura Stramonium,** *Linn. Sp. Pl.* ed. 1, p. 179; *DC. Prodr.* xiii. 1. p. 540; *Franchet, Pl. David.* p. 221.

CHINA: various localities (*Ross* ! *Henry* ! *Mesny* ! and others). Herb. Kew.

Now all over the world in temperate and tropical regions.

[*Datura Metel*, Linn., and *D. ferox*, Linn., both widely spread plants, are also recorded as occurring in China.]

1. **Scopolia japonica,** *Maxim. in Mél. Biol.* viii. p. 629; *Franch. et Savat. Enum. Pl. Jap.* i. p. 341.

COREA: Soul mountains (*Carles* !). Herb. Kew.

Japan.

4699 2. **Scopolia sinensis,** *Hemsl.*, n. sp.

S. luridæ simillima, differt omnino glaberrima, calyce quam corolla dimidio breviore, corollæ lobis minus rotundatis, calyce fructifero fere globoso circiter pollicari (in *S. lurida* calyx elongatus est et bipollicaris), seminibus distincte reticulato-rugosis.

HUPEH: Patung district and Chienshih (*A. Henry* !); SZECHUEN: North Wushan (*A. Henry* !). Herb. Kew.

There are excellent fruiting specimens of this plant, but only one perfect flower, which we have not dissected, because it is better to keep it whole; and the decided different characteristics indicated above readily distinguish it from *S. lurida*, Dunal, which it otherwise closely resembles.

3. **Scopolia tangutica,** *Maxim. in Mél. Biol.* xi. p. 275.

KANSUH: head of the Hoangho (*Przewalski* ex *Maximowicz*).

1. **Physochlaina physaloides,** *G. Don, Gen. Syst.* iv. p. 470.

Scopolia physaloides, *Dunal in DC. Prodr.* xiii. 1. p. 554.

Hyoscyamus physaloides, *Linn. Sp. Pl.* ed. 1. p. 180; *Ledeb. Fl. Ross.* iii. p. 184; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Bot. Mag.* t. 852; *Sweet, Brit. Fl. Gard.* i. t. 13.

NORTH CHINA (ex *Dunal* et *Maximowicz*).

Widely spread in Siberia.

1. **Przewalskia tangutica,** *Maxim. in Mél. Biol.* xi. p. 275.

KANSUH: Tangut region, Upper Hoangho (*Przewalski* ex *Maximowicz*).

1. **Hyoscyamus niger,** *Linn. Sp. Pl.* ed. 1, p. 179; *DC. Prodr.* xiii. 1. p. 546; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Franchet, Pl. David.* p. 221; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 244.

Recorded from various parts of China; and Dr. Henry sends cultivated specimens from the Patung district in Hupeh. Maximowicz records it from the Tsungling range bounding Shensi and Kansuh. It is spread from Western Europe to Eastern Asia, often as an escape from cultivation.

95. SCROPHULARINEÆ.

1. **Celsia coromandeliana,** *Vahl, Symb.* iii. p. 79; *DC. Prodr.* x. p. 246; *Hance in Journ. Bot.* 1878, p. 231; *Hook. f. Fl. Brit. Ind.* iv. p. 251.

Scrophularia chinensis, *Linn. Mant.* p. 250; *Smith in Rees's Cyclop.* xxxii.; *DC. Prodr.* x. p. 317.

HUPEH: Ichang (*A. Henry*!); SZECHUEN: above Kweichow (*Faber*!); KWANGTUNG: West river (*Sampson*, hb. *Hance*, 8244!). Mus. Brit.; Herb. Kew.

Afghanistan to Ava and China.

[Maingay collected a specimen of a species of *Verbascum* in marshes near Shanghai, where it was probably introduced.]

1. **Linaria buriatica,** *Turcz. in Bull. Soc. Nat. Mosc.* 1838, i. p. 98, absque descript., et 1851, ii. p. 302; *Benth. in DC. Prodr.* x. p. 281; *Ledeb. Fl. Ross.* iii. p. 211; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475.

NORTH CHINA (ex *Bentham* et *Maximowicz*).

Siberia.

[*Linaria Elatine*, Mill., is naturalized in Hongkong, and *L. spuria*, Mill., is recorded by Loureiro as growing in cultivated ground in Kwangtung.]

2. **Linaria vulgaris,** *Mill. Gard. Dict.* ed. 8, n. 1; *Benth. in DC. Prodr.* x. p. 273; *Debeaux, Fl. Tchef.* p. 103 (var. sinensis); *Franchet, Pl. David.* p. 221, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 239.

Antirrhinum Linaria, *Linn. Sp. Pl.* ed. 1, p. 616; *Lour. Fl. Cochinch.* p. 383.

Linaria linifolia, *Bunge, Enum. Pl. Chin. Bor.* p. 49, non *Willd.*

Linaria quadrifolia, *Hance in Journ. Bot.* 1871, p. 133.

CHIHLI: near Peking (ex *Maximowicz*); SHINGKING: Peiling (*Webster*!); Kaichow to Kiuchow (*Ross*!); SHANTUNG: Chefoo (*Swinhoe*! *Forbes*!); COREA (*Perry*!). Mus. Brit.; Herb. Kew.

Western Europe through Siberia to Mandshuria.

✓ 1. **Scrophularia Henryi,** *Hemsl.*, n. sp.

Herba parce glanduloso-pilosula, 9–15 poll. alta, caulibus crassiusculis obscure 4-angularibus pauciramosis. *Folia* omnia opposita, longe petiolata, plane membranacea, mollia, ovato-oblonga, grosse crenato-dentata, cum petiolo usque ad 5 poll. longa. *Flores* pauci, subspicati, pedicellis quam capsulæ brevioribus; calycis segmenta leviter inæqualia, ovato-lanceolata, obtusa, capsula dimidio breviora; corolla . . . . . . *Capsula* lævis, breviter ovoidea, absque stylo persistente circiter 3 lineas longa.

HUPEH: Kuei, on wooded precipices (*A. Henry*!). Herb. Kew.

✓ Var.? **glabrescens,** *Hemsl.*; fere glabra, caulibus nitidis, foliis minus membranaceis conspicue venosis, calycis segmentis latioribus 2 anterioris rotundatis.

HUPEH: Hsingshan (*A. Henry*!). Herb. Kew.

If these two forms be not the same species they must be very closely allied, and remarkable for the few subspicate flowers. They seem, from the description, to belong to the same group as *S. Mœllendorffi*, Maxim.

2. **Scrophularia Mœllendorffi,** *Maxim. in Mél. Biol.* x. p. 683.

SHANSI: Siaowutaishan, above the forest-line at 7500 to 9000 feet (*Mœllendorff* ex *Maximowicz*).

✓ 3. **Scrophularia** (§ **Tomiophyllum**) **ningpoensis,** *Hemsl.*, n. sp.

Herba perennis, undique glabra, vel interdum parce minuteque

glanduloso-puberula, 2½–3 ped. alta, caulibus simplicibus tetragonis lævibus, internodiis quam folia sæpius brevioribus. *Folia* omnia opposita, breviter petiolata vel superiora subsessilia, tenuia, fere membranacea sed rigidiuscula, ovata vel ovato-lanceolata, usque ad 6 poll. longa, acuta, basi rotundata, crenulato-serrulata, subtus pallidiora, conspicue venosa. *Flores* circiter 5 lineas longi, laxissime paniculati, ramulis pedicellisque elongatis filiformibus vel fere capillaribus, bracteis minutissimis; calycis segmenta suborbicularia; corollæ obliquæ lobi 5, subæquales (2 superiores majores), rotundatæ; stamina stylusque leviter exserta; staminodium amplum, fere orbiculare, sessile; ovarium glabrum. *Capsula* lævis, ovoidea, acuminata, circiter 3 lineas longa.

CHEKIANG: mountains of Ningpo (*Faber*!). Herb. Kew.

Characterized by the loose panicle with exceedingly slender branchlets and pedicels. It is nearest *S. lateriflora*, Trautv., in aspect; but that is referred to the section *Venilia*.

4. **Scrophularia Oldhami,** *Oliver in Journ. Linn. Soc.* ix. p. 167; *Franchet, Pl. David.* p. 222; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 36.

Scrophularia Buergeriana, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. pp. 116, 210.

CHIHLI: Takiosze, near Peking (*Bretschneider*!), Jehol (*David* ex *Franchet*). Mus. Brit.; Herb. Kew.

Japan.

1. **Scrofella chinensis,** *Maxim. in Mél. Biol.* xii. p. 763.

SZECHUEN: northern district in the elevated plain near Dshindshetan (*Potanin*!). Herb. Kew.

1. **Brandisia Hancei,** *Hook. f. Fl. Brit. Ind.* iv. p. 257, in nota.

Brandisia discolor, *Hance in Journ. Bot.* 1880, p. 299, non *Hook. f. et Thoms.*

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*!); KWEICHAU: near the city of Kweiyang (*Mesney*!); CHINA: without indication of the province—Chinkiang and river Yangtze (*Maries*!), Laichiangteng (*Bourne*!), Mus. Brit.: Herb. Kew.

1. **Paulownia Fortunei,** *Hemsl.*

Arbor 20-pedalis (*Ford*), ramis floriferis crassis primum albido- vel fulvo-furfuraceis. *Folia* longe petiolata, papyracea vel subcoriacea, elongato-cordiformia, lobis rotundatis, absque petiolo usque ad 10 poll. longa (pauca superiora inter flores multo minora, ovata vel lanceolata, basi rotundata vel cuneata) longe acuminata, acuta, leviter undulata, supra glabra, atro-viridia, subnitida, subtus albida, præter costam venasque primarias brevissime densissimeque tomentosa, venis primariis paucis subtus elevatis; petiolus teres, usque ad 5 poll. longus. *Flores* usque ad 3½ poll. longi, anguste paniculati, ramulis (vel pedunculis) lateralibus sæpius trifloris; paniculæ interdum foliaceæ (*i. e.* pedunculis trifloris axillaribus), pedicellis crassis furfuraceis circiter 9 lineas longis; calyx furfurascens, crassus, circiter 9 lineas longus, lobis deltoideis obtusis; corolla longior et angustior quam in *P. imperiali* et magis obliqua, intus rugulosa simul maculata, lobis latis rotundatis 3 anticis sensim longioribus; genitalia quam corolla saltem dimidio breviora. *Capsula* lignosa vel crustacea, lævis, oblonga, acuminata, cum calyce usque 3½ poll. longa; semina numerosissima, oblonga, circiter 3 lineas longa, sulcato-striata, testa in alam irregularem radiato-striatem utrinque fissam expansa.—*Paulownia imperialis,* Hance in Journ. Bot. 1885, p. 326, *non* Sieb. et Zucc. *Campsis Fortunei,* Seem. Journ. Bot. 1867, p. 373.

CHINA: without locality (*Fortune,* 46, 48!); SHANTUNG: Chefoo (*Hance*! *Forbes*! *Clarke*!); KWANGTUNG: North-river district (*Ford*!), near Shuikwan (*B. C. Henry*!). Mus. Brit.; Herb. Kew.

Readily distinguished by its much elongated leaves, covered beneath with a pallid, almost white very short and dense tomentum, and by the longer, relatively narrower flowers and larger fruit.

2. **Paulownia imperialis,** *Sieb. et Zucc. Fl. Jap.* i. p. 27, t. 10; *DC. Prodr.* x. p. 300; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 33; *Bot. Mag.* t. 4666.

CHEKIANG: Ningpo (*Cooper*! *Hancock*! *Everard*!); HUPEH: wild on cliffs, Chienshih (*A. Henry*!). Mus. Brit.; Herb. Kew.

Japan.

Dr. Henry notes that he observed this tree wild in various mountain localities; and Consul Cooper's specimens were "taken from trees 40 to 50 feet high."

1. **Mimulus nepalensis,** *Benth. Scroph. Ind.* p. 29, et *in DC. Prodr.* x. p. 373; *Hook. f. Fl. Brit. Ind.* iv. p. 258; *Franch. et Savat. Enum. Pl. Jap.* i. p. 343, et ii. p. 455.

Mimulus nepalensis, *Benth.*, var. japonica, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 116.

HUPEH: Ichang, Patung, and neighbourhood (*A. Henry*!); SZECHUEN: Mount Omei, 3000 to 8000 feet (*Faber*!); South Wushan (*A. Henry*!). Herb. Kew.

Eastern India and Japan.

2. **Mimulus tenellus,** *Bunge, Enum. Pl. Chin. Bor.* p. 49; *Benth. in DC. Prodr.* x. p. 373; *Maxim. in Mél. Biol.* ix. p. 401.

CHIHLI: springs on the Panshan mountains (*Bunge*!), near Peking (*Bretschneider*!). Herb. Kew.

1. **Mazus caducifer,** *Hance in Journ. Bot.* 1882, p. 292.

ANWHEI: near the city of Wuhu (*Bullock*, hb. *Hance*, 21825!). Mus. Brit.

2. **Mazus gracilis,** *Hemsl.*, n. sp.

Herba sobolifera, glabra vel cito glabrescens, caulibus floriferis sobolibusque gracillimis 6–10 poll. longis, floriferis erectis infra medium paucifoliatis. *Folia* petiolata, tenuiuscula, late obovata vel fere orbicularia, inferiora maxima cum petiolo vix pollicaria, crenulata vel interdum subintegra. *Flores* lutei (*Henry*), circiter semipollicares, laxe subsecundeque racemosi, longiuscule graciliterque pedicellati, minute bracteati, pedicellis calyces æquantibus vel excedentibus; calyx usque ad medium 5-lobatus, lobis oblongis vel obovatis acutis apice leviter recurvis; calyx fructifer leviter auctus; corolla angusta; stamina didynamia, longiora antheris connatis, filamentis filiformibus glabris; ovarium glabrum, stylo glabro filiforme stamina excedente.

HUPEH: Patung district (*A. Henry*, 4063!). Herb. Kew.

3. **Mazus lanceifolius,** *Hemsl.*, n. sp.

Herba perennis, siccitate nigrescens, omnino glabra vel citissimo glabrescentia, erecta, multicaulis, caulibus simplicibus gra-

cilibus tetragonis. *Folia* omnia opposita, inferiora squamiformia, vel si frondosa obovato-oblonga, apice rotundata, cætera subsessilia, pœne membranacea, anguste lanceolata, 2½–3½ poll. longa, acutissima, basin versus attenuata, remote obsoleteque denticulata, subtus pallidiora, subglauca, venis primariis paucis remotis. *Flores* parvi, circiter 6 in racemum gracilem scorpoideum terminalem breviter pedunculatum dispositi, pedicellis gracilibus quam flores brevioribus, bracteis minutis; calyx 3–4 lineas longus, usque ad medium fere æqualiter 5-lobatus, lobis lanceolatis acutis unicostatis; corolla (perfecte evoluta non visa) calycem vix superans? *Capsula* ovoidea, acuminata.

HUPEH: Chienshih (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!). Herb. Kew.

✓4. **Mazus pulchellus**, *Hemsl.*, n. sp.

Herba subacaulis, vel caule breviter evoluto, primum leviter floccosa, demum tota glabra vel glabrescentia. *Folia* subrosulata, vel in caule brevi crebra, opposita, membranacea, obovato-spatulata, usque ad 8 poll. longa sed sæpius breviora, grosse dentato-serrata, apice sæpius rotundata, deorsum in petiolum alatum attenuata. *Scapus* erectus, racemosus, multiflorus, simplex vel multiramosus, 6–12 poll. altus. *Flores* rosei vel albi (*Henry*), pollicares, longiuscule graciliterque pedicellati; pedicelli ½–1½ poll. longi, bracteis brevibus linearibus suffulti; calyx parvus, 1½–2 lineas longus, fere ad medium subæqualiter 5-lobatus, lobis ovato-lanceolatis vix acutis 1-costatis; corolla circiter pollicaris, valde inæqualiter bilabiata, labiis latis, inferiore intus barbato, tubo brevi angusto; antheræ per paria connatæ, filamentis filiformibus; ovarium glabrum, stylo glabro stamina longiora æquante stigmate bilamellato. *Capsula* ignota.

HUPEH: Ichang gorge (*Maries*!), Ichang and immediate neighbourhood (*A. Henry*, 800, 1377, 1377 A, 3418!). Herb. Kew.

Judging from the most highly developed of the wild specimens, this must be a very ornamental plant. It is most nearly related to the Indian *Mazus dentatus*, Wall., which has distinctly petiolate broadly crenated leaves, simple scapes, and smaller flowers, with a relatively larger calyx.

✓5. **Mazus procumbens**, *Hemsl.*, n. sp.

Herba perennis undique molliter albo-pilosis, caulibus numerosis gracilibus duris procumbentibus 12–18 poll. longis simplicibus vel ramosis, internodiis quam folia sæpius brevioribus. *Folia* mollia, crassiuscula, longe petiolata, maximam partem alterna, orbiculari-spathulata vel orbicularia, $\frac{1}{2}$–$1\frac{1}{2}$ poll. longa, distincte crenato-dentata, venis immersis inconspicuis. *Flores* purpurei (*Henry*), parvi, circiter 3–4 lineas longi (perfecte evoluti non visi), ad apices ramulorum laxe racemosi, ebracteati, pedicellis gracilibus quam flores 2–3plo longioribus; calyx pilosus, campanulatus, æqualiter 5-lobatus, lobis ovato-lanceolatis acutis . . . . . . *Capsula* parva, globosa.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 636, 1628!). Herb. Kew.

Dr. Henry's 636 is a luxuriant state, with leaves nearly twice as large as those described above, and less hairy.

6. **Mazus rugosus**, *Lour. Fl. Cochinch.* p. 385; *Benth. in DC. Prodr.* x. p. 375; *Benth. Fl. Hongk.* p. 247; *Henriques in Bol. Soc. Brot.* iii. p. 145; *Maxim. Prim. Fl. Amur.* pp. 205 et 475, et *in Mél. Biol.* ix. p. 402; *Debeaux, Fl. Tchef.* p. 103, *Fl. Shangh.* p. 45, et *Fl. Tients.* p. 35; *Sweet, Brit. Fl. Gard.* t. 36.

Mazus vandellioides, *Hance in Walp. Ann.* iii. p. 193.

Tittmannia obovata, *Bunge, Enum. Pl. Chin. Bor.* p. 49.

Vandellia obovata, *Walp. Rep.* iii. p. 294.

Lindernia japonica, *Thunb. Fl. Jap.* p. 253.

Hornemannia bicolor, *Willd. Enum. Pl. Hort. Berol.* p. 654; *Reichb. Hort. Bot. Icon. Pl. Exot.* t. 37.

CHIHLI and SHINGKING to YUNNAN, HONGKONG, FORMOSA, and the LUCHU ARCHIPELAGO; apparently common. Mus. Brit.; Herb. Kew.

Afghanistan to Mandshuria, Japan, and the Malay Archipelago.

The Rev. E. Faber sends a specimen from Kiukiang which is quite glabrous, and the leaves almost entire.

7. **Mazus stachydifolius**, *Maxim. in Mél. Biol.* ix. p. 404, et *in Bull. Soc. Nat. Mosc.* 1879, p. 39; *Hance in Journ. Bot.* 1882, p. 37; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Franchet, Pl. David.* p. 222, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 239.

Tittmannia stachydifolia, *Turcz. in Bull. Soc. Nat. Mosc.* 1837, n. vii. p. 156.

Vandellia stachydifolia, *Walp. Rep.* iii. p. 294.

Mazus villosus, *Hemsl. in Journ. Bot.* 1876, p. 209.

CHIHLI: around Peking (*Kirilow* ex *Maximowicz*); SHINGKING: Tungling (*Webster*!), Chienshan (*Ross*!), Talienhwan (*Birnie*!); SHANTUNG: Chefoo (*Perry*!); CHEKIANG: Tahoo lake (*Carles*); KIANGSI: Kiukiang (*Shearer*! *Faber*! *Maries*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!), on the Yangtze (*Faber*!). Mus. Brit.; Herb. Kew.

Dahuria and Mandshuria.

1. **Lancea tibetica,** *Hook. f. et Thoms. in Hook. Kew Journ. Bot.* ix. p. 244, t. 7; *Kanitz, Bot. Res. Szech. Centr.-As. Exped.* p. 8; *Hook. f. Fl. Brit. Ind.* iv. p. 260.

KANSUH: south of the Hoangho (*Piasezki* ex *Maximowicz* in litt.).

North India.

1. **Lindenbergia philippensis,** *Benth. Scroph. Ind.* p. 22, et *in DC. Prodr.* x. p. 377; *Hook. f. Fl. Brit. Ind.* iv. p. 261.

Lindenbergia macrostachya, *Hance in Journ. Bot.* 1878, p. 111; *Maxim. in Mél. Biol.* ix. p. 405, nec *Benth.*

HUPEH: Ichang (*A. Henry*, 1156!); KWANGTUNG: on the walls of Canton (*Hance*, 5592!), porphyritic caves near Saichushan (*Sampson*!). Mus. Brit.; Herb. Kew.

India and Malaya.

2. **Lindenbergia urticæfolia,** *Lehm. in Link et Otto, Ic. Pl. Rar. Hort. Berol.* p. 95, t. 48; *Benth. in DC. Prodr.* x. p. 377; *Hook. f. Fl. Brit. Ind.* iv. p. 261; *Hance in Journ. Bot.* 1878, p. 111.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*!); KWANGTUNG; along the river Lienchan (*Nevin*, hb. *Hance*!), without locality (*Ford*!). Mus. Brit.; Herb. Kew.

Afghanistan to Ceylon and Burma, and in the Malay Archipelago.

1. **Adenosma capitata,** *Benth.* ex *Hance in Journ. Linn. Soc.* xiii. p. 114; *Hook. f. Fl. Brit. Ind.* iv. p. 264.

Pterostigma capitatum, *Benth. Scroph. Ind.* p. 21, et *in DC. Prodr.* x. p. 380; *Fl. Hongk.* p. 248.

Stemodia capitata, *Benth. in Bot. Reg.* sub t. 1470.

KWANGTUNG: without locality (*Ford*!); HONGKONG (*Champion*! *Hance*!). Mus. Brit.; Herb. Kew.

India and Malaya.

2. **Adenosma grandiflora,** *Benth.* ex *Hance in Journ. Linn. Soc.* xiii. p. 114.

Pterostigma grandiflorum, *Benth. in DC. Prodr.* x. p. 380; *Fl. Hongk.* p. 237; *Hook. et Arn. Bot. Beech. Voy.* t. 45; *Henriques in Bol. Soc. Brot.* iii. p. 145; *Bot. Reg.* 1846, t. 16; *Seem. Bot. Voy. 'Herald,'* p. 402.

Pterostigma rubiginosum, *Walp. in Nov. Act. Nat. Cur.* xix. Suppl. 1, p. 393, et *Rep.* iii. p. 264.

Digitalis sinensis, *Lour. Fl. Cochinch.* p. 378.

CHINA: without locality (*Fortune*, 91!); KWANGTUNG: Macao (*Callery*!); HONGKONG (*Hinds*! *Seemann*! *Champion*! *Urquhart*! *Wright*! *Wilford*!). Mus. Brit.; Herb. Kew.

3. **Adenosma microcephala,** *Hook. f. Fl. Brit. Ind.* iv. p. 264.

KWANGTUNG: Lofaushan (*Ford*!). Herb. Kew.

Tenasserim and Cambodia.

1. **Limnophila erecta,** *Benth. in DC. Prodr.* x. p. 388; *Hook. f. Fl. Brit. Ind.* iv. p. 267; *Maxim. in Mél. Biol.* ix. p. 406.

Stemodia gratioloides, *Benth. Scroph. Ind.* p. 25.

KWANGTUNG: Pakwan (*Hance*!). Mus. Brit.

Bengal and Tenasserim.

We have not identified any Chinese specimens with this, which is probably, as Bentham suggests, a small-flowered variety of *L. gratissima*, Blume. A specimen collected by Mr. Playfair at Pakhoi, Kwangtung, may be referable here, and we have no reason to doubt Hance's identification.

2. **Limnophila gratissima,** *Blume, Bijdr.* p. 750; *Hook. f. Fl. Brit. Ind.* iv. p. 268.

Limnophila punctata, *Blume, Bijdr.* p. 750; *Benth. in DC. Prodr.* x. p. 388, et *Fl. Hongk.* p. 248; *Hook. f. Fl. Brit. Ind.* iv. p. 268; *Maxim. Mél. Biol.* ix. p. 406.

KWANGTUNG: various localities (*Hance*! *Ford*! *Sampson*!); HONGKONG (*Hance*! *Wilford*!). Mus. Brit.; Herb. Kew.

India, Malaya, North Australia, and Japan.

3. **Limnophila gratioloides,** *R. Br. Prod. Fl. Nov. Holl.* p. 442; *Benth. in DC. Prodr.* x. p. 389; *Hook. f. Fl. Brit. Ind.* iv. p. 271.

HAINAN (*Swinhoe*!). Herb. Kew.

India, Malaya, Australia, and Tropical Africa.

4. **Limnophila heterophylla,** *Benth. Scroph. Ind.* p. 25, et *in DC. Prodr.* x. p. 390; *Hook. f. Fl. Brit. Ind.* iv. p. 270; *Hance in Journ. Bot.* 1878, p. 231.

KWANGTUNG: along the west river (*Sampson*, hb. *Hance*, 9395!). Mus. Brit.; Herb. Kew.

India, Malaya, and Japan.

5. **Limnophila hirsuta,** *Benth. in DC. Prodr.* x. p. 388, et *Fl. Hongk.* p. 248; *Hook. f. Fl. Brit. Ind.* iv. p. 268; *Maxim. in Mél. Biol.* ix. p. 406; *Seem. Bot. Voy. 'Herald,'* p. 402.

HONGKONG (*Wilford*! *Hance*!). Mus. Brit.; Herb. Kew.

Widely spread in India, and reaching Ceylon and the Malay Archipelago.

6. **Limnophila hypericifolia,** *Benth. in DC. Prodr.* x. p. 386; *Hook. f. Fl. Brit. Ind.* iv. p. 269; *Hance in Journ. Bot.* 1883, p. 324.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); KWANGTUNG: Lienchau river (*B. C. Henry*!). Mus. Brit.; Herb. Kew.

Northern and Southern India.

7. **Limnophila Roxburghii,** *G. Don, Gen. Syst.* iv. p. 543; *Hook. f. Fl. Brit. Ind.* iv. p. 265, nec *Benth.*

Limnophila Menthastrum, *Benth. in DC. Prodr.* x. p. 386; *Maxim. in Mél. Biol.* ix. p. 406.

FORMOSA (*Oldham*!); KWANGTUNG (*Ford*!). Herb. Kew.

India, Malaya, and Polynesia.

8. **Limnophila sessiliflora,** *Blume, Bijdr.* p. 750; *Benth. in DC. Prodr.* x. p. 389; *Hook. f. Fl. Brit. Ind.* iv. p. 270; *Maxim. in Mél. Biol.* ix. p. 407; *Franchet, Pl. David.* p. 223.

KIANGSI: Kiukiang (*David* ex *Franchet*); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!). Herb. Kew.

India, Malaya, Ceylon, and Japan.

1. **Herpestis Monniera,** *H. B. K. Nov. Gen. et Sp.* ii. p. 366;

Benth. in DC. Prodr. x. p. 400; *Fl. Hongk.* p. 249; *Maxim. in Mél. Biol.* ix. p. 407; *Hook. f. Fl. Brit. Ind.* iv. p. 272; *Bot. Mag.* t. 2557.

Anisocalyx limnanthiflorus, *Hance in Walp. Ann.* iii. p. 195.

FORMOSA, KWANGTUNG, and HONGKONG (*Wright*! *Playfair*!). Mus. Brit.; Herb. Kew.

Tropical and subtropical regions throughout the world.

1. **Dopatrium junceum,** *Hamilt. in Benth. Scroph. Ind.* p. 31, et *in DC. Prodr.* x. p. 407; *Benth. Fl. Hongk.* p. 249; *Hook. f. Fl. Brit. Ind.* iv. p. 274.

KWANGTUNG: Whampoa, in rice-fields (*Hance*, 6058!); HONGKONG (*Wright*!). Mus. Brit.; Herb. Kew.

India, Ceylon, Malaya, Australia, and Japan.

[*Picria Fel-terræ*, Lour. (Fl. Cochinch. p. 393), "cultivated in China," is doubtingly referred by Bentham and Hooker (Gen. Pl. ii. p. 954) to *Curanga amara*, Juss., a plant widely spread in India and Malaya, though not known with certainty to occur in China.]

1. **Torenia Benthamiana,** *Hance in Ann. Sc. Nat.* 4^{me} série, xviii. p. 226; *Maxim. in Mél. Biol.* ix. p. 411.

KWANGTUNG: Whampoa and elsewhere (*Wright*! *Sampson*! *Hance*, 5901!). Mus. Brit.; Herb. Kew.

2. **Torenia concolor,** *Lindl. in Bot. Reg.* 1846, t. 62; *Bot. Mag.* t. 6797 A.

Torenia longiflora, *Morr. in Ann. de Gand,* ii. p. 441, cum ic. color. (*T. colorans* in tab.), et p. 471.

Torenia rubens, var. grandiflora, *Benth. Fl. Hongk.* p. 250.

Torenia asiatica, *Linn.*, var. concolor, *Hook. f. Fl. Brit. Ind.* iv. p. 277.

CHINA: without locality (*Fortune*, 125!); FORMOSA: various localities, common (*Wilford*! *Oldham*! *Hancock*!); HONGKONG (*Wright*! *Urquhart*! *Champion*!). Mus. Brit.; Herb. Kew.

3. **Torenia cordifolia,** *Roxb. Pl. Corom.* ii. p. 52, t. 161; *Benth. in DC. Prodr.* x. p. 409; *Hook. f. Fl. Brit. Ind.* iv. p. 276; *Franchet, Pl. David.* p. 222; *Bot. Mag.* t. 3715.

KIANGSI: Kiukiang (*David*, 763, ex *Franchet*).

North India, Burma, Java.

The specimens referred to this species by Hance (Journ. Bot. 1878, p. 231) belong rather to *T. peduncularis*, Benth.

4. **Torenia flava,** *Hamilt.* ex *Benth. Scroph. Ind.* p. 38, et *in DC. Prodr.* x. p. 411; *Fl. Hongk.* p. 250; *Hook. f. Fl. Brit. Ind.* iv. p. 278; *Hance in Journ. Bot.* 1878, p. 231; *Maxim. in Mél. Biol.* x. p. 410; *Bot. Mag.* t. 6700.

Torenia Bailloni, *Godefroy in Illustr. Horticole*, xxv. (1878), p. 136, t. 324, et *in Rev. Hort.* 1879, p. 69, fig. 15; *Floral Magazine*, 1878, t. 331.

KWANGTUNG: Whampoa (*Hance*, 1021!), along the North river (*Sampson*!), Lofaushan (*Ford*!); HONGKONG (*Harland*!). Mus. Brit.; Herb. Kew.

Eastern India and Malaya.

5. **Torenia Fordii,** *Hook. f. Bot. Mag.* t. 6797 B.

KWANGTUNG: Lofaushan (*Ford*!). Herb. Kew.

6. **Torenia oblonga**, *Hance in Ann. Sc. Nat.* 4^{me} série, xv. p. 227, in nota; *Maxim. in Mél. Biol.* ix. p. 411.

Vandellia oblonga, *Benth. Scroph. Ind.* p. 35, et *in DC. Prodr.* x. p. 413; *Hook. et Arn. Bot. Beech. Voy.* p. 202.

Torenia lobelioides, *Hook. et Arn. Bot. Beech. Voy.* p. 202.

Torenia oblonga, *Hook et Arn., Steud. Nomencl. Bot.* (errore).

KWANGTUNG: Macao (*Callery*!), Swatow (*Perry*!); HONGKONG (*Wright*! *Champion*! *Harland*!). Mus. Brit.; Herb. Kew.

7. **Torenia parviflora,** *Hamilt.* ex *Benth. Scroph. Ind.* p. 39, et *in DC. Prodr.* x. p. 410; *Hook. f. Fl. Brit. Ind.* iv. p. 278; *Hance in Journ. Bot.* 1878, p. 231; *Maxim. in Mél. Biol.* ix. p. 410.

KWANGTUNG: in various localities (*Sampson*, *Hance*!). Mus. Brit.

Eastern India, Malaya, tropical Africa, and America; perhaps introduced in the New World.

8. **Torenia peduncularis,** *Benth. in Wall. Cat.* 3956, ex *Hook. f. Fl. Brit. Ind.* iv. p. 276.

Torenia edentula, *Benth. in DC. Prodr.* x. p. 410, non *Griff. fide Hook. f.*; *Bot. Mag.* t. 4229.

Torenia cordifolia, *Hance* non *Roxb.*

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 158, 2183, 2787!); SZECHUEN: Chungking, Suifu, and Mount Omei (*Faber*!); KWANGTUNG: Tingushan (*Sampson*, hb. *Hance*, 9188!). Mus. Brit.; Herb. Kew.

India and Malaya.

9. **Torenia vagans,** *Roxb. Fl. Ind.* iii. p. 96; *Hook. f. Fl. Brit. Ind.* iv. p. 277?

Torenia diffusa, *G. Don, Prodr. Fl. Nep.* p. 86; *DC. Prodr.* x. p. 410; *Maxim. in Mél. Biol.* ix. p. 410; *Walp. in Nov. Act. Nat. Cur.* xix. Suppl. i. p. 395.

Torenia rubens, *Benth. in DC. Prodr.* x. p. 410, ex *Hook. f.*

KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); KWANGTUNG: Syngmoon (*Meyen* ex *Walpers*). Mus. Brit.; Herb. Kew.

Widely spread in India.

1. **Vandellia angustifolia,** *Benth. Scroph. Ind.* p. 37, et *in DC. Prodr.* x. p. 417; *Hook. f. Fl. Brit. Ind.* iv. p. 282; *Walp. in Nov. Act. Nat. Cur.* xix. Suppl. i. p. 394; *Maxim. in Mél. Biol.* ix. p. 413.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); KWANGTUNG: Lintin (*Meyen* ex *Walpers*); HONGKONG (*Hinds* ex *Bentham in DC. Prodr.* sed specimen nondum repertum). Mus. Brit.; Herb. Kew.

India, Malaya, Ceylon, and Japan.

2. **Vandellia crustacea,** *Benth. Scroph. Ind.* p. 35, et *in DC. Prodr.* x. p. 413; *Fl. Hongk.* p. 251; *Hook. f. Fl. Brit. Ind.* iv. p. 279; *Wight, Ic. Pl. Ind. Or.* t. 8; *Maxim. in Mél. Biol.* ix. p. 412; *Hook. et Arn. Bot. Beech. Voy.* p. 202; *Henriques in Bol. Soc. Brot.* iii. p. 145.

Hornemannia ovata, *Link et Otto, Ic. Pl. Sel. Hort. Berol.* i. p. 9, t. 3.

Tittmannia ovata, *Reichb. Hort. Bot.* i. p. 27.

FORMOSA (*Oldham* ex *Maximowicz*); HUPEH: Ichang (*A. Henry*!); KWANGTUNG: Pakhoi (*Playfair*!); HONGKONG (*Wright*! *Champion*!). Mus. Brit.; Herb. Kew.

Tropics and subtropics of the Old World; also occurring in America, but probably introduced.

3. **Vandellia erecta,** *Benth. Scroph. Ind.* p. 36, et *in DC. Prodr.* x. p. 415; *Hook. f. Fl. Brit. Ind.* iv. p. 281; *Maxim. in Mél. Biol.* ix. p. 413.

Vandellia Pyxidaria, *Maxim. l. c.* p. 419.

SHANTUNG: Chefoo (hb. *Forbes*!); FOKIEN: Amoy (*Hance*, 1454!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!). Mus. Brit.; Herb. Kew.

Central Europe to Mandshuria and Japan, Malaya, and Polynesia.

4. **Vandellia hirsuta,** *Hamilt.* ex *Benth. Scroph. Ind.* p. 36, et *in DC. Prodr.* x. p. 414; *Hook. f. Fl. Brit. Ind.* iv. p. 280; *Hance in Journ. Bot.* 1878, p. 231.

Tittmannia viscosa, *Reichb. Hort. Bot.* i. p. 26, t. 38.

Hornemannia prostrata, *Jacq. Eclog.* t. 150.

KWANGTUNG: banks of the West river (*Sampson*! *Hance*, 17723!). Mus. Brit.; Herb. Kew.

India, Ceylon, and Malaya to the Philippine Islands.

5. **Vandellia limosa,** *Walp. in Nov. Act. Nat. Cur.* xix. Suppl. i. p. 394; *Benth. in DC. Prodr.* x. p. 417.

KWANGTUNG: Lintin (*Meyen* ex *Walpers*).

Bentham suggests that this may be the same as his *V. crustacea.*

6. **Vandellia mollis,** *Benth. Scroph. Ind.* p. 37, et *in DC. Prodr.* x. p. 414; *Hook. f. Fl. Brit. Ind.* iv. p. 281; *Maxim. in Mél. Biol.* ix. p. 412.

KWANGTUNG: marshy places round Canton (*Hance*, 8041!). Mus. Brit.; Herb. Kew.

Eastern India.

7. **Vandellia nummularifolia,** *G. Don, Prodr. Fl. Nep.* p. 86; *Benth. in DC. Prodr.* x. p. 416; *Hook. f. Fl. Brit. Ind.* iv p. 282.

SZECHUEN: Mount Omei at 3500 to 4000 ft. (*Faber*!). Herb. Kew.

Northern India, from Kashmir to Khasia.

[*Vandellia obovata*, Walp. (Rep. iii. p. 294), syn. *Tittmannia obovata*, Bunge (Enum. Pl. Chin. Bor. p. 49), a plant from North China, has not been identified.]

8. **Vandellia pedunculata,** *Benth. Scroph. Ind.* p. 37, et *in DC. Prodr.* x. p. 416; *Hook. f. Fl. Brit. Ind.* iv. p. 282; *Maxim. in Mél. Biol.* ix. p. 413.

Vandellia arridens, *Hance in Ann. Sc. Nat.* 4^{me} série, xv. p. 226.

NORTH-WEST FORMOSA (*Swinhoe*!); KWANGTUNG: Whampoa (*Wright*! *Hance*, 1665, 6936!), Pakhoi (*Playfair*!); HONGKONG (*Tate*!). Mus. Brit.; Herb. Kew.

9. **Vandellia scabra,** *Benth. Scroph. Ind.* p. 36, et *in DC. Prodr.* x. p. 414; *Fl. Hongk.* p. 251; *Hook. f. Fl. Brit. Ind.* iv. p. 281; *Maxim. in Mél. Biol.* ix. p. 412.

KWANGTUNG: Lofaushan (*Ford*!); HONGKONG (*Wilford*!). Herb. Kew.

India, Ceylon, Malaya, Madagascar, and South Africa.

10. **Vandellia subcrenulata,** *Miq. in Journ. de Bot. Néerl.* i. p. 113.

CHINA: without locality (*Krone* ex *Miquel*).

This is probably the same as some other species here enumerated.

11. **Vandellia urticifolia,** *Hance in Journ. Bot.* 1868, p. 301; *Maxim. in Mél. Biol.* ix. p. 412.

KWANGTUNG: North river (*Sampson*! *Hance*, 13769!). Mus. Brit.; Herb. Kew.

1. **Ilysanthes hyssopioides,** *Benth. in DC. Prodr.* x. p. 419, et *Fl. Hongk.* p. 252; *Hook. f. Fl. Brit. Ind.* iv. p. 283; *Maxim. in Mél. Biol.* ix. p. 420.

Bonnaya hyssopioides, *Benth.*; *Wight. Ic. Pl. Ind. Or.* t. 857.

CHINA: without locality (*Fortune*, 179!); HONGKONG (*Wright*! *Hance*! *Wilford*!). Mus. Brit.; Herb. Kew.

Eastern and Central India to Ceylon.

1. **Bonnaya brachiata,** *Link et Otto, Ic. Pl. Sel. Hort. Berol.* i. p. 25, t. 11; *DC. Prodr.* x. p. 420; *Hook. f. Fl. Brit. Ind.* iv. p. 284; *Hance in Journ. Bot.* 1879, p. 13; *Maxim. in Mél. Biol.* ix. p. 421.

FORMOSA: Takow (*Playfair*!); KWANGTUNG: various localities (*Hance*, 323! *Sampson*!). Mus. Brit.; Herb. Kew.

India, Ceylon, Malaya, to the Philippine Islands.

2. **Bonnaya reptans,** *Spreng. Syst. Veg.* i. p. 41; *Benth. in DC. Prodr.* x. p. 420; *Hook. f. Fl. Brit. Ind.* iv. p. 284; *Hance in Journ. Bot.* 1879, p. 13.

KWANGTUNG: Lofaushan and other localities (*Hance*! *Ford*! *Wenyon*!). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya.

3. **Bonnaya tenuifolia,** *Spreng. Syst. Veg.* i. p. 42; *Benth. in DC. Prodr.* x. p. 422; *Hook. f. Fl. Brit. Ind.* iv. p. 286; *Maxim. in Mél. Biol.* ix. p. 421.

KWANGTUNG: Whampoa and other localities (*Hance*! *Sampson*! *Nelson*!), Pakhoi (*Playfair*!). Mus. Brit.; Herb. Kew.

Bengal to Ceylon and Tenasserim.

4. **Bonnaya veronicæfolia,** *Spreng. Syst. Veg.* i. p. 41; *Benth. in DC. Prodr.* x. p. 421, et *Fl. Hongk.* p. 252; *Henriques in Bol. Soc. Brot.* iii. p. 145; *Maxim. in Mél. Biol.* ix. p. 421; *Hook. f. Fl. Brit. Ind.* iv. p. 285 (cum varietatibus); *Wight, Ic. Pl. Ind. Or.* t. 1411.

Bonnaya verbenæfolia, *Spreng. Syst. Veg.* i. p. 42; *Seem. Bot. Voy. 'Herald,'* p. 402.

Bonnaya grandiflora, *Spreng. Syst. Veg.* i. p. 41.

Gratiola veronicæfolia, *Roxb. Corom. Pl.* ii. p. 30, t. 154.

Gratiola grandiflora, *Roxb. l. c.* ii. p. 42, t. 179.

SOUTH CHINA, FORMOSA, and LUCHU ARCHIPELAGO, common; also in HUPEH (*Wright*! *Seemann*! *Hinds*! *Oldham*! *Playfair*! *A. Henry*! and others). Mus. Brit.; Herb. Kew.

Throughout India, Ceylon, and Malaya.

The Chinese specimens belong mainly to the form originally named *B. veronicæfolia*, Benth.

1. **Microcarpæa muscosa,** *R. Br. Prodr. Fl. Nov. Holl.* p. 436; *DC. Prodr.* x. p. 433; *Benth. Fl. Hongk.* p. 253; *Hook. f. Fl. Brit. Ind.* iv. p. 287.

HONGKONG (*Wright*!). Herb. Kew.

India, Ceylon, Malaya, and Australia.

1. **Hemiphragma heterophyllum,** *Wall. Tent. Fl. Nep.* p. 16, t. 8; *Benth. in DC. Prodr.* x. p. 429; *Hook. f. Fl. Brit. Ind.* iv. p. 289; *Franchet in Bull. Soc. Bot. France*, xxxii. p. 27.

YUNNAN: mount Koualapo, between Tali and Hokin at 3000 metres (*Delavay* ex *Franchet*).

North India, from Garhwal eastward.

1. **Scoparia dulcis,** *Linn. Sp. Pl.* ed. 1, p. 116; *Benth. in DC. Prodr.* x. p. 431, et *Fl. Hongk.* p. 252; *Henriques in Bol. Soc. Brot.* iii. p. 145; *Hook. f. Fl. Brit. Ind.* iv. p. 289.

FORMOSA: Takow (*Playfair* !); KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Wright* !). Herb. Kew.

A common tropical American plant now found in Asia, Africa, and Australia, but supposed to have been originally introduced.

[*Scoparia gypsophiloides,* Walp. (Nov. Act. Nat. Cur. xix. Suppl. i. p. 394), a Chinese plant, is unknown to us.]

(1891 1. **Rehmannia angulata,** *Hemsl.*, n. sp.

Rehmannia glutinosa, *Libosch,* var. angulata, *Oliver in Hook. Ic. Pl.* xvi. t. 1589.

Rehmannia glutinosa, *Hance in Journ. Bot.* 1880, p. 300, non *Libosch.*

HUPEH: Ichang and immediate neighbourhood (*Watters*! *A. Henry,* 1131, 3600!); KWEICHAU (*Faber* !). Mus. Brit.; Herb. Kew.

Professor Oliver now agrees that it is more convenient to give this form specific rank.

2. **Rehmannia glutinosa,** *Libosch*; *DC. Prodr.* ix. p. 275; *Maxim. in Mél. Biol.* x. p. 684, et *in Bull. Soc. Nat. Mosc.* 1879, p. 33; *S. Moore in Journ. Bot.* 1878, p. 138; *Debeaux, Fl. Tients.* p. 29; *Franchet, Pl. David.* p. 223; *Franch. et Savat. Enum. Pl. Jap.* i. p. 328.

Digitalis glutinosa, *Gærtn. in Nov. Comm. Acad. Petrop.* xiv. p. 544, t. 20, ex *DC.*

Gerardia glutinosa, *Bunge, Enum. Pl. Chin. Bor.* p. 49.

Rehmannia chinensis, *Fisch. et Mey. in Ind. Sem. Hort. Petrop.* 1835, p. 36; *Bot. Reg.* t. 1960; *Bot. Mag.* t. 3653.

CHIHLI: neighbourhood of Peking (*Bunge* ! *Williams* ! *Bretschneider* ! *Bushell* ! *David* ! *Hancock* !); CHEKIANG: Ningpo (*Everard* !). Mus. Brit.; Herb. Kew.

Japan.

With the exception of the Ningpo specimen, and that may have

been cultivated, all the specimens we have seen of this species are from the extreme northern province of Chihli.

3. **Rehmannia? Oldhami,** *Hemsl.*, n. sp.

Herba caulescens, erecta, pedalis vel sesquipedalis, caulibus simplicibus, internodiis quam folia multoties brevioribus. *Folia* alterna, longe petiolata, tenuia, fere membranacea, oblongo-lanceolata vel ovata, sæpius leviter obliqua, cum petiolo usque ad 9 poll. longa, utrinque attenuata, remote irregulariterque dentata, supra parce hispidula, subtus pallidiora, glabrescentia. *Flores* circiter 1¼–1½ poll. longi, in racemum densiusculum terminalem usque ad 9 poll. longum nutantem parvibracteatum hirsutum dispositi, pedicellis calycem æquantibus; bracteæ lineari-lanceolatæ, acutæ, pedicellos æquantes vel longiores; calyx hirsutus, leviter inæqualiterque alte 5-lobatus, lobis anguste lanceolatis acutissimis; corolla anguste campanulata, leviter obliqua, basi postice leviter gibbosa, vix bilabiata, lobis 5 brevibus rotundatis lateralibus exterioribus; stamina 4, inclusa, glabra, antheris magnis bilocularibus per paria approximatis loculis divergentis; ovarium pilosulum, uniloculare, placentis 2 bilamellatis, lamellis utrinque multiovuliferis; stylus glaber, inclusus. *Capsula* nondum visa.

FORMOSA: Tamsui (*Oldham*, 400!), between Kimpaoli and Pachena, very rare, growing on dripping rocks under the shade of course rank vegetation (*Hancock*!). Herb. Kew.

The distinctly one-celled ovary of this plant points to the Gesneraceæ, and perhaps *Rehmannia* would be better placed in that order.

4. **Rehmannia Piasezkii,** *Maxim. in Mél. Biol.* x. p. 684.

CHEKIANG: Ningpo (*Cooper*!); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 255, 1157, 1376, 3839!); SHENSI: southern part (*Piasezki* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

We have seen no authenticated specimen of this species. The specimens referred here are easily distinguished from *R. angulata*, Hemsl., by the rounded lobes and teeth of the leaves, and from *R. glutinosa*, Libosch, by the much larger flowers and looser calyx. Some of Dr. Henry's specimens are stunted and bear only one flower on a naked scape.

5. **Rehmannia rupestris,** *Hemsl.*, n. sp.

Herba subscaposa, 9–18 poll. alta, floccoso-lanata vel interdum fere glabra vel glabrescens. *Folia* radicalia subrosulata, ampla, crassa, longe petiolata, maxima cum petiolo pedalia, ovato-oblonga, basi interdum cordata, apice rotundata, grosse crenata vel dentata vel obtuse lobulata, venis primariis paucis crassis; petiolus laminam æquans vel brevior; folia caulina nulla vel pauca, radicalibus similia sed minora. *Flores* rosei (teste *Henry*), subsecundi, numerosi, breviter pedicellati, penduli, racemo interdum foliato; calyx pilosus, leviter oblique campanulatus, sæpius (an semper ?) circiter 15-dentatus vel lobulatus, dentibus inæqualibus linearibus acutis; corolla bipollicaris, angusta, fere recta, lobis brevibus rotundatis; stamina inclusa, antheris magnis didymis; stylus stamina paullo superans. *Capsula* oblonga, acuta, lævis, ut videtur unilocularis; semina numerosissima, minutissima, oblonga, lævia.

HUPEH: Fang, Nanto and mountains to the northward (*A. Henry*, 2604, 4458, 6615 !). Herb. Kew.

Dr. Henry notes that this bears the Chinese name Ai-pai-ts'ai (= cliff-cabbage), and that it is much esteemed as a medical simple. It grows only in almost inaccessible places on the faces of cliffs.

Rehmannia rupestris, Hemsl., differs essentially from the other species in having thick, usually woolly leaves on long petioles, and in the multifid calyx.

1. **Calorhabdos axillaris,** *Benth. et Hook. f. Gen. Pl.* ii. p. 963; *S. Moore in Journ. Bot.* 1875, p. 230; *Hance in Journ. Bot.* 1877, p. 298.

Pæderota axillaris, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 20; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 118.

Pæderota bracteata, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 20 ?

Pæderota villosula, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 118 ?

Clematis chusanensis, *Pluk. Amalth.* p. 60, et *Phytogr.* t. 384. fig. 1.

CHEKIANG: Chusan (*Cunningham* !); KIANGSI: Kiukiang (*Shearer* !); HUPEH: Fang (*A. Henry* !); SZECHUEN: Chung-ching (*Bourne* !). Mus. Brit.; Herb. Kew.

Japan.

2. **Calorhabdos cauloptera,** *Hance in Journ. Bot.* 1877, p. 298.

HUPEH: Ichang, Nanto and mountains to the northward (*A.

Henry !); KWANGTUNG: Lienchau river and other localities (*B. C. Henry* ! *Nevin* ! *Ford* !). Mus. Brit.; Herb. Kew.

✓ 3. **Calorhabdos latifolia,** *Hemsl.*, n. sp. (Plate IV.)

Herba, more *Vincæ*, vagans vel procumbens, præter calycem fere undique glabra vel citissimo glabrescens, caulibus elongatis flagelliformibus ut videtur simplicibus angulatis, internodiis folia æquantibus vel superantibus vel inferioribus quam folia brevioribus. *Folia* distincte petiolata, tenuia, flaccida, late ovata, interdum fere orbicularia, maxima, 2½ poll. longa et 2¼ poll. lata, sursum gradatim minora, acute acuminata, crebre serrulata, venis primariis utrinque 3–4 subtus sat conspicuis. *Flores* albi roseotincti (teste *Henry*), in racemos densissimos amentiformes circiter pollicares axillares brevissime pedunculatos dispositi, inæqualiter pedicellati (nunc subsessiles nunc distincte etsi breviter pedicellati), cum staminibus longe exsertis circiter 5 lineas longi; pedicelli apice juxta calycem 1-bracteati; bractea lineari-lanceolata, acutissima, corollam fere æquans, ciliolata; calycis segmenta bracteis simillima sed paullo breviora angustioraque; corolla angusta, cylindrica, breviter 4-lobata, extus glabra, intus longe pilosa, lobis deltoideis erectis; stamina quam corolla fere duplo longiora, filamentis infra medium pilosis; ovarium ovoideum, glabrum, stylo filiformi glabro stamina æquante vel longiore. *Capsula* nondum visa.

HUPEH: Antelope glen, near Ichang (*A. Henry* !). Herb. Kew.

The broadly ovate, sometimes nearly orbicular leaves distinguish this from all the other species.

✓ 4. **Calorhabdos stenostachya,** *Hemsl.*, n. sp.

Herba, ut videtur, erecta vel suberecta, saltem tripedalis, tota fere glaberrima, siccitate nigrescens, caulibus teretibus sursum valde attenuatis, internodiis quam folia multo brevioribus. *Folia* brevissime petiolata, subcoriacea, lanceolata, usque ad 8 poll. longa sed sæpius breviora, longissime acutissime acuminata, basi cuneata vel rotundata, crebre aculeolato-serrulata, venis primariis paucis subtus tantum conspicuis. *Flores* albi (teste *Henry*), parvi, racemosi, brevissime pedicellati; racemi axillares, vel interdum ramulos axillares terminantes, angustissimi, spicæformes, usque 4 poll. longi, brevissime pedunculati, pedicellis 1-bracteatis, bracteis puberulis lineari-lanceolatis acutis calycem

J.N. Fitch del. et lith.

CALORHABDOS LATIFOLIA, *Hemsl.* Fig 2 C. AXILLARIS, *Benth et Hook.*

æquantibus vel paullo superantibus; calycis obscurissime puberuli segmenta inæqualia, lineari-lanceolata, acutissima, quam corolla circiter tertia parte breviora; corolla angusta, cylindrica, intus leviter hirsuta, brevissime 4-lobata, lobis deltoideis erectis; stamina matura inclusa (an semper?); ovarium ovoideum, glabrum, stylo incluso. *Capsula* vix lineam longa, crustacea, 4-valva; semina pauca, ellipsoidea, lævia.

HUPEH: Nanto and mountains to the northward (*A. Henry*, 3044!); SZECHUEN: Mount Omei at 3000 to 4000 feet (*Faber*!). Herb. Kew.

Distinguished from *C. venosa*, Hemsl., its nearest ally, by stouter habit, relatively inconspicuously veined leaves, and smaller flowers in slenderer racemes.

5. **Calorhabdos venosa**, *Hemsl.*, n. sp.

Herba prostrata vel suberecta, fere omnino glabra, caulibus 1–3-pedalibus teretibus vel obscure bilineatis, internodiis quam folia multo brevioribus. *Folia* brevissime petiolata, coriacea, rigidiuscula, lanceolata, usque ad 5 poll. longa, sed sæpius breviora, acute acuminata, basi subcuneata, aculeolato-serrulata, supra nitida, subtus pallidiora, grosse reticulato-venosa, venis primariis paucis inter se anastomosantibus, supra costaque insigniter impressis, subtus valde elevatis. *Flores* purpurei (fide *Henry*), subsessiles, densissime racemoso-spicati, racemis axillaribus subsessilibus 1–1½ poll. longis, bracteis obscure ciliolatis angustis acuminatis; calycis glabri segmenta valde inæqualia, acuminata, longiora corollam fere æquantia; corolla cylindrica, circiter sesquilineam longa, intus villosa, breviter 4-lobulata, lobulis deltoideis; stamina nunc inclusa nunc longe exserta; ovarium glabrum, stylo longe exserto.

CHEKIANG: Ningpo mountains (*Faber*!); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 55, 2187, 4638!). Herb. Kew.

1. **Veronica agrestis**, *Linn. Sp. Pl.* ed. 1, p. 13; *Benth. in DC. Prodr.* x. p. 487; *Maxim. in Mél. Biol.* xi. p. 278; *Franch. et Savat. Enum. Pl. Jap.* i. p. 350; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 120.

Veronica arvensis, *Thunb. Fl. Jap.* p. 20, non *Linn.*

Veronica hederæfolia, *Miq. in Prol. Fl. Jap.* pp. 360 et 385, ex *Maxim.*

KIANGSU: Shanghai (*Maingay*! *Carles*!); KIANGSI: Kiukiang (*Maries*! *Faber*! *Shearer*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); COREAN ARCHIPELAGO (*Oldham*, 644!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Western and Southern Europe and North Africa, eastward to Japan.

2. **Veronica alpina,** *Linn. Sp. Pl.* ed. 1, p. 11; *Benth. in DC. Prodr.* x. p. 482; *Ledeb. Fl. Ross.* iii. p. 248.

COREA: Changpeishan, 1000 to 7000 feet (*James*!). Herb. Kew.

Mountains of Western Europe to Mandshuria and Sitcha, and also in arctic North America.

3. **Veronica Anagallis,** *Linn. Sp. Pl.* ed. 1, p. 12; *DC. Prodr.* x. p. 467; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Ledeb. Fl. Ross.* iii. p. 236; *Debeaux, Fl. Shangh.* p. 45; *Franchet, Pl. David.* p. 224, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 240.

CHIHLI: near Peking (*Bretschneider*! *Bushell*!); FORMOSA: Takow (*Playfair*!); HUPEH: Ichang (*A. Henry*!); KWANGTUNG: near Canton (*Hance*!); LUCHU ARCHIPELAGO (*Wright*! *Beechey*!). Mus. Brit.; Herb. Kew.

All round the northern hemisphere; and also found in South Africa, where it may have been introduced.

4. **Veronica cana,** *Wall.*; *Benth. Scroph. Ind.* p. 45, et *in DC. Prodr.* x. p. 475; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 120; *Franch. et Savat. Enum. Pl. Jap.* i. p. 349.

HUPEH: Patung, Chienshih, and Fang (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!). Herb. Kew.

North India, from Chumba to Sikkim, and in Japan.

5. **Veronica javanica,** *Blume, Bijdr.* p. 742; *Benth. in DC. Prodr.* x. p. 489; *Hook. f. Fl. Brit. Ind.* iv. p. 296.

Veronica Maddeni, *Edgew. ex Hook. f. l. c.*

LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

North India from Simla to Khasia, and in Java.

6. **Veronica laxa,** *Benth. Scroph. Ind.* p. 45, et *in DC. Prodr.* x. p. 474; *Hook. f. Fl. Brit. Ind.* iv. p. 295.

Veronica Thunbergii, *A. Gray in Mem. Amer. Acad.* n. s. vi. p. 402, in adnot.; *Franch. et Savat. Enum. Pl. Jap.* i. p. 349; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 196.

HUPEH: Patung district and Changlo (*A. Henry*, 4051, 6253!); SZECHUEN: South Wushan (*A. Henry*!). Mus. Brit.; Herb. Kew.

Western Himalaya, from Kashmir to Kumaon, and in Japan.

7. **Veronica longifolia,** *Linn. Sp. Pl.* ed. 1, p. 10; *DC. Prodr.* x. p. 465; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 119; *Franch. et Savat. Enum. Pl. Jap.* i. p. 348; *Ledeb. Fl. Ross.* iii. p. 232; *Bot. Mag.* t. 6407 (var. subsessilis).

COREAN ARCHIPELAGO: Green Island, rare on hill-tops (*Oldham*, 641!). Herb. Kew.

Central and Eastern Europe, through Central Asia to Japan.

8. **Veronica Murorum,** *Maxim. in Mél. Biol.* xi. p. 276.

FORMOSA: Tamsui (*Oldham*, 407!). Herb. Kew.

9. **Veronica peregrina,** *Linn. Sp. Pl.* ed. 1, p. 14; *Benth. in DC. Prodr.* x. p. 482; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 120; *Franch. et Savat. Enum. Pl. Jap.* i. p. 349; *Franchet, Pl. David.* p. 224.

KIANGSU: Shanghai (*Maingay*!); SOUTHERN SHENSI (*David* ex *Franchet*). Herb. Kew.

This ranges from Canada and Oregon to Chili and Patagonia; it also occurs in Japan, and is naturalized in various parts of Europe.

10. **Veronica serpyllifolia,** *Linn. Sp. Pl.* ed. 1, p. 12; *Benth. in DC. Prodr.* x. p. 482; *Hook. f. Fl. Brit. Ind.* iv. p. 296; *Franchet in Bull. Soc. Bot. France,* xxxii. p. 27.

HUPEH: Patung, Ichang and immediate neighbourhood (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!), summit of Mount Omei (*Faber*!); YUNNAN: above Koualapo (*Delavay* ex *Franchet*). Herb. Kew.

Europe, North Africa, temperate Asia, and North and South America; also colonized in many other countries.

11. **Veronica spicata,** *Linn. Sp. Pl.* ed. 1, p. 10; *DC. Prodr.* x. p. 466; *Franch. et Savat. Enum. Pl. Jap.* i. p. 348; *Franchet, Pl.*

David. p. 224, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 239; *Ledeb. Fl. Ross.* iii. p. 233.

HUPEH: Hsingshan (*A. Henry*!); KWANGTUNG: Lofaushan (*Ford*!). Herb. Kew.

Western Europe, through Central Asia to Japan.

Several other Chinese localities are recorded for this species, among them Jehol (*David*, 1978); but this number, as represented in the Kew Herbarium, we take to be *V. spuria*, Linn., though it is difficult to determine the limits of these two species.

12. **Veronica spuria,** *Linn. Sp. Pl.* ed. 1, p. 10; *Ledeb. Fl. Ross.* iii. p. 231 (varietates); *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 239; *Debeaux, Fl. Tchef.* p. 104.

Veronica paniculata, *Linn. Sp. Pl.* ed. 2, p. 18; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 119; *Benth. in DC. Prodr.* x. p. 465.

Veronica angustifolia, *Fisch. Cat. Hort. Gorenk.*; *Link, Enum. Hort. Berol.* i. p. 19; *Hance in Journ. Linn. Soc.* xiii. p. 84.

Veronica galactites, *Hance in Ann. Sc. Nat.* 5me série, v. p. 232.

CHIHLI: Peking (*Williams*, cult.! *Bushell*! *Bretschneider*!), Jehol (*David*, 1978!); SHINGKING: Peiling and other localities (*Webster*! *Ross*!); SHANTUNG (*Maingay*!); CHEKIANG: Ningpo mountains (*Faber*!); KWANGTUNG: various localities (*Sampson*, hb. *Hance*, 11320! *Ford*!); COREA: Chemulpo (*Carles*!); COREAN ARCHIPELAGO: Green Island (*Oldham*, 642!). Mus. Brit; Herb. Kew.

Central Europe, through Central Asia to Japan.

13. **Veronica vandellioides,** *Maxim. in Mél. Biol.* xii. p. 767.

WESTERN CHINA: Tangut, in alpine meadows at 10,000 feet (*Przevalski* ex *Maximowicz*).

14. **Veronica virginica,** *Linn. Sp. Pl.* ed. 1, p. 9; *Benth. in DC. Prodr.* x. p. 463; *Franch. et Savat. Enum. Pl. Jap.* i. p. 347; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 118; *A. Gray, Syn. Fl. N. Am.* ii. 1. p. 286.

Veronica sibirica, *Linn. Sp. Pl.* ed. 2, p. 12; *DC. Prodr.* x. p. 464; *Franchet, Pl. David.* p. 223, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 239; *Hance in Journ. Bot.* 1878, p. 111.

SHINGKING: Laoyehling and other hills near Moukden (*James*!): SHANSI: Siaowutaishan (*Hancock*!). Mus. Brit.; Herb. Kew.

Eastern Siberia, Japan, and Eastern North America.

1. **Alectra indica,** *Benth. in DC. Prodr.* x. p. 339; *Hook. f. Fl. Brit. Ind.* iv. p. 297.

Glossostylis arvensis, *Benth. Scroph. Ind.* p. 49.

KWANGTUNG: Lofaushan (*Ford*!). Herb. Kew.

Mountains of India and Burma, and in the Mauritius.

1. **Buchnera cruciata,** *Hamilt. in D. Don, Prodr. Fl. Nep.* p. 91; *Benth. in DC. Prodr.* x. p. 495, et *Fl. Hongk.* p. 253; *Hook. f. Fl. Brit. Ind.* iv. p. 298; *Franchet, Pl. David.* p. 224.

Buchnera stricta, *Benth. in Hook. Comp. Bot. Mag.* i. p. 367.

Buchnera densiflora, *Hook. et Arn. Bot. Beech. Voy.* p. 305.

KIANGSI: Kiukiang (*David* ex *Franchet*); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); KWANGTUNG: Pakhoi (*Playfair*!); HONGKONG (*Champion*!). Mus. Brit.; Herb. Kew.

Eastern India and Malaya.

1. **Striga lutea,** *Lour. Fl. Cochinch.* p. 22; *Benth. in Hook. Comp. Bot. Mag.* i. p. 363; *Hook. f. Fl. Brit. Ind.* iv. p. 229.

Striga hirsuta, *Benth. in DC. Prodr.* x. p. 502, et *Fl. Hongk.* p. 254.

Striga coccinea, *Benth. in Hook. Comp. Bot. Mag.* i. p. 364.

Striga phœnicea, *Benth. loc. cit.*

Campuleia coccinea, *Hook. Exot. Fl.* t. 203.

Buchnera coccinea et B. phœnicea, *Benth. Scroph. Ind.* p. 40.

Striga parvula, *Miq. in Journ. de Bot. Néerl.* i. p. 113?

KWANGTUNG: Pakhoi (*Playfair*!); HONGKONG (*Wright*! *Champion*!); HAINAN (*Swinhoe*!). Mus. Brit.; Herb. Kew.

Widely spread in tropical and subtropical Asia, Africa, and Madagascar.

In justification of the specific name *hirsuta*, given in the 'Prodromus,' Bentham says:—"Color floris variat coccineus, phœniceus, luteus, vel albus (nec ut videtur unquam cærulescens) itaque nomina specifica e colore sumpta rejeci."

2. **Striga Masuria,** *Benth. in Hook. Comp. Bot. Mag.* i. p. 364, et *in DC. Prodr.* x. p. 503, et *Fl. Hongk.* p. 254.

KWANGTUNG (*Sampson*, hb. *Hance*, 883!); HONGKONG (*Harland*!); KWANGSI (*Wenyon*!). Mus. Brit.; Herb. Kew.

India and Malaya.

1. **Centranthera Brunoniana,** *Wall.* ex *Benth. in DC. Prodr.* x.

p. 525; *Hook. f. Fl. Brit. Ind.* iv. p. 301; *Hance in Journ. Bot.* 1885, p. 326.

Centranthera hispida, *Benth. Fl. Hongk.* p. 554, quoad plantam floribus flavis.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 2245!); FORMOSA (*Oldham*, 404!); KWANGTUNG: Lofaushan (*Faber*! *Ford*!); HONGKONG (*Champion*!). Mus. Brit.; Herb. Kew.

Burma and Tenasserim.

2. **Centranthera hispida**, *R. Br. Prodr. Fl. Nov. Holl.* p. 438; *Benth. in DC. Prodr.* x. p. 525, et *Fl. Hongk.* p. 254, præter plantam floribus flavis.

FOKIEN: Amoy (*Hance*, 1461!). Mus. Brit.; Herb. Kew.

India, Malaya, Ceylon, and Australia.

We have referred the yellow-flowered specimens to *C. Brunoniana*, Wall., and the purple ones to *C. hispida*, R. Br., without any confidence of their distinctness.

3. **Centranthera humifusa**, *Wall.* ex *Benth. in DC. Prodr.* x. p. 525; *Hook. f. Fl. Brit. Ind.* iv. p. 301.

KWANGTUNG: Pakwan hills (*Sampson*, hb. *Hance*!). Mus. Brit.; Herb. Kew.

India, Malaya, and Ceylon.

1. **Sopubia trifida**, *Hamilt. in D. Don's Prodr. Fl. Nep.* p. 88; *Benth. in DC. Prodr.* x. p. 522; *Hook. f. Fl. Brit. Ind.* iv. p. 302.

KWANGTUNG: North River (*Ford*!). Herb. Kew.

Throughout India and in Ceylon.

1. **Siphonostegia chinensis**, *Benth. Scroph. Ind.* p. 51, et *in DC. Prodr.* x. p. 538; *Hook. et Arn. Bot. Beech. Voy.* p. 203, t. 44; *Bunge in Bull. Sc. Acad. Petrop.* vii. p. 276; *Hance in Journ. Linn. Soc.* xiii. p. 115, et *in Journ. Bot.* 1874, p. 261; *Maxim. Prim. Fl. Amur.* pp. 208 et 475; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 240.

CHIHLI, SHINGKING, and COREA to HUPEH and KWANGTUNG, in all collections! Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

This plant ranges from Macao, in about 22° N., to Chunganskoi Piket in 48° N. lat.

2. **Siphonostegia læta,** *S. Moore in Journ. Bot.* 1880, p. 5.

Siphonostegia chinensis, *Benth.*, var.?, *S. Moore in Journ. Bot.* 1875, p. 229.

KIANGSI: Kiukiang (*Shearer*!). Herb. Kew.

1. **Cymbaria daurica,** *Linn. Sp. Pl.* ed. 1, p. 618; *Benth. in DC. Prodr.* x. p. 556; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475, et *in Mém. Acad. St. Pétersb.* sér. 7, xxix. (1881), n. 3, p. 64, t. 4. figg. 1–10; *Ledeb. Fl. Ross.* iii. p. 264.

CHIHLI (ex *Maximowicz*).

Altai, Baikal, Dahuria.

2. **Cymbaria mongholica,** *Maxim. in Mém. Acad. St. Pétersb.* sér. 7, xxix. (1881), n. 3, p. 66, t. 4. figg. 11–20.

KANSUH: on the upper Hoangho (*Przewalski* ex *Maximowicz*).

Mongolia.

1. **Monochasma Savatieri,** *Franchet* ex *Maxim. in Mém. Acad. St. Pétersb.* sér. 7, xxix. (1881), n. 3, p. 58, t. 2. figg. 19–29, et *in Bull. Soc. Nat. Mosc.* 1879, p. 39; *Hance in Journ. Bot.* 1887, p. 12.

Siphonostegia species nondescripta, *S. Moore in Journ. Bot.* 1878, p. 138.

KIANGSI: Kiukiang (*Maries*!); CHEKIANG: Ningpo (*Everard*! *Cooper*!); FOKIEN: Amoy (*Fortune*, 76!). Foochow *Carles*!). Mus. Brit.; Herb. Kew.

2. **Monochasma Sheareri,** *Maxim. in Mém. Acad. St. Pétersb.* sér. 7, xxix. (1881), n. 3, p. 56, t. 2. figg. 1–18, et *in Bull. Soc. Nat. Mosc.* 1879, p. 39; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 458; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 209.

Bungea Sheareri, *S. Moore in Journ. Bot.* 1875, p. 229, et 1878, p. 138; *Hemsl. in op. cit.* 1876, p. 209.

SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); KIANGSU: hills near Shanghai (*Carles*!), Fengwangshan (*Forbes*!); CHEKIANG: Ningpo (*Everard*!); KIANGSI: Kiukiang (*Shearer*!): HUPEH: Ichang and immediate neighbourhood (*A. Henry*!). Mus. Brit.; Herb. Kew.

3. **Monochasma monantha,** *Hemsl.*, n. sp.

Suffrutex vel herba caulibus primariis procumbentibus gracilibus lignescentibus, caulibus secundariis numerosissimis erectis vel adscendentibus cum flore subterminali usque ad 5 poll. longis. *Folia* confertissima, arcte obtegentia, sessilia, molliter tomentosa, lineari-lanceolata, 3–6 lineas longa, subacuta. *Flores* solitarii, terminales vel pseudo-terminales, 6–9 lineas longi, erecti, brevissime pedunculati; calyx quam corolla dimidio brevior, breviter subæqualiterque 5-fidus, lobis suberectis; corollæ tubus gradatim dilatatus; corollæ lobi venosi, subæquales, oblongo-rotundati simul apiculati, patentes; stamina breviter exserta. *Capsula* nondum visa.

KWANGTUNG; North River (*Ford's* native collector!), Hongkong botanic garden, cult. (*Ford*!). Herb. Kew.

1. **Phtheirospermum chinense,** *Bunge in Fisch. et Mey. Ind. Sem. Hort. Petrop.* i. (1835), p. 35; *Benth. in DC. Prodr.* x. p. 391; *Maxim. Prim. Fl. Amur.* p. 208; *Hance in Journ. Bot.* 1882, p. 292; *Franchet, Pl. David.* p. 225, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 240.

CHIHLI, SHINGKING, and COREA to HUPEH and KIANGSI, apparently common, and in all collections! Mr. Ford also sends a specimen labelled KWANGTUNG; but this is the only one from the southern provinces. Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

1. **Euphrasia officinalis,** *Linn. Sp. Pl.* ed. 1, p. 604; *Benth. in DC. Prodr.* x. p. 552; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Hook. f. Fl. Brit. Ind.* iv. p. 305.

CHIHLI: Pohuashan (*Bullock*!). Herb. Kew.

Western Europe to North India and Japan; also in North America.

*1. **Pedicularis alaschanica,** *Maxim. in Mél. Biol.* x. p. 91, et xii. p. 860, n. 119. fig. 86.

KANSUH: both eastern and western (*Przewalski*! *Potanin*!). Herb. Kew.

North India, Mongolia, and Tibet.

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* We are indebted to the kindness of Mr. C. J. de Maximowicz for the determination of most of the material in this genus, and for descriptions of two or three new species. We are also indebted to Mr. A. Franchet for the diagnoses of the new species to which his name is appended.

2. **Pedicularis Alopecurus,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 816, n. 47. fig. 33.

YUNNAN (*Delavay* ex *Maximowicz*).

3. **Pedicularis anas,** *Maxim. in Mél. Biol.* xii. p. 860, n. 120. fig. 87.

SZECHUEN: around the guard-tower of Tshiutshetan (*Potanin* ex *Maximowicz*).

4. **Pedicularis armata,** *Maxim. in Mél. Biol.* x. p. 86, et xii. p. 794, n. 17. fig. 9.

KANSUH: western territory (*Przewalski* ex *Maximowicz*); SZECHUEN (*Potanin* ex *Maximowicz*).

5. **Pedicularis Artselaeri,** *Maxim. in Mél. Biol.* x. p. 127, et xii. p. 914, n. 222.

SHANSI: Siaowutaishan, at 3600 to 5000 feet (*Moellendorff* ex *Maximowicz*); HUPEH: South Patung (*A. Henry*, 5326!). Herb. Kew.

6. **Pedicularis axillaris,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 825, n. 58. fig. 39.

YUNNAN: Tsangshan, above Tali (*Delavay*!). Herb. Kew.

7. **Pedicularis bidentata,** *Maxim. in Mél. Biol.* xii. p. 795, n. 19. fig. 11.

SZECHUEN: Mount Kungala (*Potanin* ex *Maximowicz*).

8. **Pedicularis binaria,** *Maxim. in Mél. Biol.* xii. p. 861, n. 121. fig. 88.

SZECHUEN: at the sources of the river Atuluuwa (*Potanin*!). Herb. Kew.

9. **Pedicularis brevifolia,** *D. Don, Prodr. Fl. Nep.* p. 94; *Hook. f. Fl. Brit. Ind.* iv. p. 307; *Maxim. in Mél. Biol.* xii. p. 817, n. 48.

YUNNAN: above Lankong at 3000 metres (*Delavay*!). Herb. Kew.

North India, from Kashmir to Sikkim, at 13,000 to 16,000 feet.

10. **Pedicularis carnosa,** *Wall. Pl. As. Rar.* ii. p. 44, t. 154; *Benth. in DC. Prodr.* x. p. 580; *Maxim. in Mél. Biol.* xii. p. 831, n. 70. fig. 52.

Yunnan: mount Tsangshan, above Tali, at 3500 metres (*Delavay* !). Herb. Kew.

North India, from Kashmir to Khasia.

11. **Pedicularis cephalantha,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 805, n. 31. fig. 20.

Yunnan: Koualapo, between Tali and Hokin (*Delavay* ex *Franchet* !). Herb. Kew.

12. **Pedicularis cheilanthifolia,** *Schrenck in Fisch. et Mey. Enum. Pl. Nov. Schrenck*, fasc. ii. p. 19; *DC. Prodr.* x. p. 562; *Hook. f. Fl. Brit. Ind.* iv. p. 308; *Maxim. in Mél. Biol.* x. p. 89, et xii. p. 869, n. 129.

Kansuh: western districts (*Przewalski* ! *Potanin* !). Herb. Kew.

North-western India, Tibet, and Mongolia.

13. **Pedicularis chinensis,** *Maxim. in Mél. Biol.* x. p. 89, et xii. p. 796, n. 21.

Pedicularis longiflora, *Rudolphi* ex *Hance in Journ. Bot.* 1878, p. 13 et p. 234.

Shansi: Siaowutaishan (*Hancock* !); Kansuh: both eastern and western (*Potanin* !). Mus. Brit.; Herb. Kew.

14. **Pedicularis comptoniæfolia,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 871, n. 131. fig. 96.

Yunnan: above Tapintze (*Delavay* !). Herb. Kew.

√ 15. **Pedicularis conifera,** *Maxim.*, n. sp. (iii. Verticillatæ, series nova, *conifera*, Maxim., rostro elongato.)

Stricta a medio conice brevi ramosa, verticillis 4–5-phyllis remotis, foliis parvis brevipetiolatis ambitu lineari, oblongis pinnatisectis segmentis approximatis utrinque ultra 10 e latiore decurrente basi oblongis v. oblongo-linearibus pinnatifidis lobis ovatis mucronato-inciso serratis, floribus apice caulis ramorumque omnium primum dense breveque racemosis, bracteis foliiformibus, calyce subsessilia turbinato 5-dentato dentibus ex integra basi rotundatis mucronato-paucidentatis tubo vix triplo brevioribus, corolla (purpurea ?) parva, glabra, tubo lato calyce incluso recto sursum dilatato quam limbus duplo breviore, galea angusta, in rostrum obtusum emarginatum rectiusculum paulo brevius attenuata, labio patente galea breviore firmo rotundato lobis lateralibus oblique obovatis terminali fere toto exserto anguste ovato apice cucullato, filamentis glabris triente superiore tubi insertis, antheris oblongo-ovatis, ovario obliquo late ovoideo.

HUPEH: South Patung (*A. Henry*, 7625!). Herb. Kew.

A *Longirostratis* tubo lato ad faucem dilatato differt. Habitus *P. polyphyllæ*, Franch., inter *Siphonanthas*, characteres vero potius *P. Alopecuros*, Franch., inter *Longirostres verticillatas*, quæ tamen tubo tenui æquali distat. Calyx 4·5 mm. Corolla 6 mm. galeæ pars porrecta 5·5 mm., sed specimina nimis juvenilia.

16. **Pedicularis cranolopha,** *Maxim. in Mél. Biol.* x. p. 85, et xii. p. 795, n. 18. fig. 10.

KANSUH: western region, on the mountains of Mudshik at 9500 feet (*Przewalski*!). Herb. Kew.

17. **Pedicularis craspedotricha,** *Maxim. in Mél. Biol.* xii. p. 839, n. 78. fig. 58.

SZECHUEN: in the northern pass of Gumakika (*Potanin* ex *Maximowicz*).

18. **Pedicularis crenata,** *Maxim. in Mél. Biol.* xii. p. 832, n. 71. fig. 53.

YUNNAN: mountain-meadows above Tapintze (*Delavay* ex *Maximowicz*).

19. **Pedicularis cristata,** *Maxim. in Mél. Biol.* xii. p. 814, n. 45. fig. 31.

SZECHUEN: northern part near the town of Szunpan (*Potanin*!). Herb. Kew.

20. **Pedicularis curvituba,** *Maxim. in Mél. Biol.* x. p. 92, et xii. p. 859, n. 118. fig. 85.

WESTERN KANSUH: frequent in river-valleys (*Przewalski* ex *Maximowicz*).

Also in Northern Tibet.

21. **Pedicularis Davidii,** *Franchet, Pl. David.* ii. p. 105; *Maxim. in Mél. Biol.* xii. p. 803, n. 29. fig. 18.

SZECHUEN: district of Moupin (*David* ex *Maximowicz*).

22. **Pedicularis debilis,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 817, n. 49.

Yunnan: in woods at the foot of the Likiang glacier (*Delavay* ex *Maximowicz*).

23. **Pedicularis Delavayi,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 791, n. 10. fig. 7.
Yunnan: Likiang, chalk-hills at 4000 metres (*Delavay*!). Herb. Kew.

24. **Pedicularis deltoidea,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 897, n. 169.
Yunnan: stony places at Tsangshan, above Tali, at 3500 metres, and on the mountains of Koualapo, near Hokin, at 3000 metres (*Delavay*!). Herb. Kew.

25. **Pedicularis densispica,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 882, n. 146. fig. 111.
Yunnan: elevated pastures, mount Tsangshan, above Tali (*Delavay*!). Herb. Kew.

26. **Pedicularis Elwesii,** *Hook. f. Fl. Brit. Ind.* iv. p. 312; *Maxim. in Mél. Biol.* xii. p. 793, n. 16.
Yunnan (*Delavay*!). Herb. Kew.
Northern India and Tibet.

27. **Pedicularis filicifolia,** *Hemsl.*, n. sp. (*Longirostres*, 5. *Axillares*, Maxim.)

"Procumbens ultra bipedalis glabra, caulibus e rhizomate brevi horizontali pluribus tenuibus, foliis omnibus oppositis petiolatis internodia superantibus v. æquantibus circuiter ellipticis 3–5-jugo-pinnatisectis segmentis brevissime petiolulatis ovatis v. ovato-oblongis obtusis mucronato-inciso-serratis, pedicellis omnibus axillaribus semper erectis folio parum brevioribus, calyce turbinato-cylindrico 5-lobo, lobis 4 ex integra basi rotundatis cristatis, summo minuto lanceolato 3-dentato, corollæ (purpureæ?) tubo vix e calyce exserto, galea in rostrum porrectum subrecurvum eam æquans attenuata, labio galeam tubumque superante patente ciliato, lobis lateralibus depresse semiorbiculatis, terminali multo minore oblongo fere toto exserto, filamentis apice tubi insertis glabris, ovario ovato-globoso."

Hupeh: S. Patung (*A. Henry*, 6105!). Herb. Kew.

"Habitus *P. macrosiphonis*, Franch., inter *Siphonanthas*, characteres potius *P. axillaris*, Franch., prope quam ponenda.

"Calyx 7·5 mm. firmus parce pilosulus. Corolla 14 mm. alta, pars porrecta galeæ 10 mm., labium 12 mm. longum. Antheræ ovatæ." (*Maximowicz* in litt.)

No. 6980, Hupeh, Hsingshan, in fruit, may be a variety; but has narrower leaves, with 9 pairs of segments.

28. **Pedicularis Filicula,** *Franchet*, ex *Maxim. in Mél. Biol.* xii. p. 853, n. 105.

YUNNAN: alpine meadows near the glacier of Likiang (*Delavay* ex *Maximowicz*).

29. **Pedicularis Franchetiana,** *Maxim. in Mél. Biol.* xii. p. 823, n. 56. fig. 40.

WESTERN SZECHUEN: region of Moupin (*David* ex *Maximowicz*).

30. **Pedicularis gracilis,** *Wall.* ex *Benth. Scroph. Ind.* p. 52, et *in DC. Prodr.* x. p. 561; *Hook. f. Fl. Brit. Ind.* iv. p. 307; *Maxim. in Mél. Biol.* xii. p. 822, n. 54.

HUPEH: South Patung (*A. Henry*!); YUNNAN: near Hokin (*Delavay*!). Herb. Kew.

Afghanistan to Khasia.

31. **Pedicularis gruina,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 799, n. 27. fig. 15.

YUNNAN: in marshes near Likiang and in oak-woods at the summit of the mountain above Tapintze (*Delavay*!). Herb. Kew.

32. **Pedicularis gyrorhyncha,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 812, n. 36. fig. 24.

YUNNAN: pass of Koualapo (*Delavay*!). Herb. Kew.

33. **Pedicularis Henryi,** *Maxim. in Mél. Biol.* xii. p. 833, n. 73. fig. 54.

KIANGSI: Kiukiang (*Forbes*!); HUPEH: Changlo, South Patung, Nanto and mountains to the northward (*A. Henry*!). Herb. Kew.

✓ 34. **Pedicularis (§ Bidentatæ) hirtella,** *Franchet*, n. sp.

Biennis?; tota rufo-hirtella, superne glandulifera, siccitate nigricans; caulis simplex, rectus, rigidus; folia infima et inferiora graciliter et breve petiolata, caulina sparsa mox subsessilia et sessilia, oblonga vel ovato-oblonga, paulo ultra medium pinnatifida, lobis subcontiguis, obtusis, incisis, lobulis minimis apice denticulatis; bracteæ ovato-lanceolatæ; flores breviter pedicellati, e medio vel nunc ex inferiore parte caulis orti in racemum laxum elongatum dispositi; calyx glandulosus, corolla 3plo brevior, tubulosus, 5-lobus, lobis 2 triangulari-lanceolatis, 3 linearibus, omnibus denticulatis; corolla pollicaris, albida vel pallide rosea, extus glandulifera; galea brevis fronte verticali, dentibus lineari-subulatus; labium breviter trilobum, lobis rotundatis subæqualibus; tubus longe exsertus, intus secus lineas 2 longitudinales dense pilosus; capsula 15 mill. longa breviter acuta.

YUNNAN: in bushy places, mount Heechanmen (*Delavay*, 2729!). Herb. Kew.

35. **Pedicularis ingens**, *Maxim. in Mél. Biol.* xii. p. 841, n. 80.

SZECHUEN: northern part, on the river Nerechu (*Potanin* ex *Maximowicz*).

36. **Pedicularis integrifolia**, *Hook. f. Fl. Brit. Ind.* iv. p. 308; *Maxim. in Mél. Biol.* xii. p. 811, n. 35. fig. 23.

YUNNAN: Koualapo, near Hokin, at 3000 metres (*Delavay*!). Herb. Kew.

Sikkim and Southern Tibet.

37. **Pedicularis kansuensis**, *Maxim. in Mél. Biol.* x. p. 287, et xii. p. 886, n. 51.

KANSUH: various localities, and SZECHUEN: on the river Nerechu, near the town Shanla (*Przewalski*! *Potanin*!). Herb. Kew.

38. **Pedicularis labellata**, *Jacquem.* ex *Decne. in Voy. Jacquem. Bot.* p. 118, t. 123; *DC. Prodr.* x. p. 565; *Maxim. in Mél. Biol.* x. p. 83, et xii. p. 792, n. 11.

KANSUH: various western localities, and in the east in the valley of the Heiho, on the border of Szechuen (*Przewalski*! *Potanin*!); YUNNAN (*Delavay*!). Herb. Kew.

Tibet and Yarkand.

39. **Pedicularis lachnoglossa**, *Hook. f. Fl. Brit. Ind.* iv. p. 311; *Maxim. in Mél. Biol.* xii. p. 837, n. 74. fig. 55.

YUNNAN: mount Koualapo, above Hokin, at 3500 metres (*Delavay*!). Herb. Kew.

North India at Chumbi and Sikkim.

40. **Pedicularis lasiophrys,** *Maxim. in Mél. Biol.* x. p. 104, et xii. p. 839, n. 77. fig. 57, var. *sinica.*

EASTERN KANSUH: summit of mount Schagola, and SZECHUEN: pass of Gumakika (*Potanin*!).

The typical form is a native of Northern Tibet.

✓41. **Pedicularis leiandra,** *Franchet*, n. sp.

Perennis, humilis, multicaulis, parce confervoideo-pilosa, fibris radicalibus fasciculatis parum incrassatis. *Folia* parva, longe petiolata, pinnatifida, lobis ovatis dentatis, caulina opposita, pauca, sæpius ad jugum unicum adducta; bracteæ petiolatæ, ovatæ. *Flores* breviter pedicellati, in racemum brevem densum vel basi interruptum dispositi; calyx parvus, 5-lobus, lobis 4 apice foliaceis, altero deltoideo dentiformi; corolla purpurascens, tubo gracili superne non ampliato; labium late ovatum rostro sensim longius, lobo medio magis producto ovato; galea edentula, superne æqualis, horizontalis, rostro recto vel demum inflexo; staminum filamenta omnia glaberrima.

P. verbenæfoliæ certe affinis sed multo minor; corollæ tubus 10–12 mill.; filamenta glabra nec hispida.

P. leiandra ad *P. porrectam* a cel. Maximowicz (Mél. Biol. xii. p. 818, n. 51) relata; sed meo sensu a planta Wallichiana egregie differt ex speciminibus a Jacquemont lectis et a cl. Bentham in herbario Musei Parisiensis denominatis.

YUNNAN: in thickets near the summit of Tsangshan (*Delavay* ex *Franchet*).

42. **Pedicularis lineata,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 887, n. 153.

YUNNAN: in the defiles of the Yentzehay, above Lankong, at 3500 metres (*Delavay*!). Herb. Kew.

43. **Pedicularis likiangensis,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 887, n. 154.

YUNNAN: Likiang, Meechan, at 4000 metres (*Delavay* ex *Maximowicz*).

44. **Pedicularis longepetiolata,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 806, n. 32.

YUNNAN: Lankong, in marshes, at 2800 metres (*Delavay* ex *Maximowicz*).

45. **Pedicularis longicaulis,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 858, n. 117. fig. 84.

YUNNAN: in thickets at Maokouchang, above Tapintze (*Delavay* ex *Maximowicz*).

46. **Pedicularis longipes,** *Maxim. in Mél. Biol.* xii. p. 824, n. 57.

SZECHUEN: northern part, mount Kungala, between the guardhouses of Tashitu and Dshindshstan (*Potanin* !). Herb. Kew.

47. **Pedicularis lutescens,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 898, n. 170.

YUNNAN: defiles of Yentzehay, above Laukong, at 3200 metres (*Delavay* !). Herb. Kew.

✓48. **Pedicularis macilenta,** *Franchet*, n. sp.

A *P. oxycarpi* affine, differt: calycis dentibus tribus cristatis nec breve subulatis, rostro recto nec deorsum supra basin et infra apicem flexo, parte media horizontali; filamentis infra medium tubi insertis glaberrimis, nec ad trientem superiorem ortis, pilosis.—Planta annua e collo unicaulis; bracteæ calyce longiores; flores albi, rostro rubescente.

YUNNAN: in humid localities on the slope of mount Yentzehay (*Delavay*, 1888, ex *Franchet*).

49. **Pedicularis macrosiphon,** *Franchet, Pl. David.* ii. p. 104; *Maxim. in Mél. Biol.* xii. p. 798, n. 26. fig. 14.

EASTERN KANSUH: not far from the town of Nanpin on margins of woods (*Potanin* ex *Maximowicz*); SZECHUEN: confines of Moupin (*David* ex *Franchet*).

50. **Pedicularis melampyriflora,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 896 (ubi sphalmate melampyrifolia, *fide* Franchet in sched.), n. 168.

YUNNAN: at the foot of mount Yanginshan, near Lankong (*Delavay* !). Herb. Kew.

51. **Pedicularis microchila,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 884, n. 148. fig. 113.

YUNNAN: mount Tsangshan, above Tali, at 3800 metres (*Delavay* !). Herb. Kew.

52. **Pedicularis moupinensis,** *Franchet, Pl. David.* ii. p. 105; *Maxim. in Mél. Biol.* xii. p. 820, n. 53. fig. 36.

SZECHUEN: region of Moupin (*David* ex *Franchet*); EASTERN KANSUH: in a wood on the north side near the top of mount Tschagola (*Potanin* ex *Maximowicz*).

53. **Pedicularis muscicola,** *Maxim. in Mél. Biol.* x. p. 84, et xii. p. 748, n. 25. fig. 13.

KANSUH: western region (*Przewalski*!), eastern region near monastery of Dshoni (*Potanin*!). Herb. Kew.

Mongolia.

54. **Pedicularis myriophylla,** *Pall. It.* iii. *App.* p. 737, ex *Maxim. in Mél. Biol.* x. p. 93, et xii. p. 858, n. 124, fig. 91; *Benth. in DC. Prodr.* x. p. 562.

On the borders of EASTERN CHINA (*Kirilow* ex *Maximowicz*).

Siberia and Mongolia.

55. **Pedicularis oligantha,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 808, n. 34. fig. 21.

YUNNAN: near Lankong, in woods, at 3000 metres (*Delavay* ex *Maximowicz*).

56. **Pedicularis oxycarpa,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 804, n. 30. fig. 19.

SZECHUEN: North Wushan (*A. Henry*!); YUNNAN: on mount Heechanmen, near Lankong (*Delavay*!). Herb. Kew.

57. **Pedicularis pilostachya,** *Maxim. in Mél. Biol.* x. p. 99, et xii. p. 877, n. 144. fig. 109.

KANSUH: summit of the alps of Sadi Soruksum at 13,500 feet (*Przewalski* ex *Maximowicz*).

58. **Pedicularis plicata,** *Maxim. in Mél. Biol.* xii. p. 888, n. 155.

EASTERN KANSUH: summit of mount Tschagola, and NORTHERN SZECHUEN: pass of Gumakika and sources of the Atulunwa river (*Potanin*!). Herb. Kew.

59. **Pedicularis polyphylla,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 809, n. 34. fig. 16.

YUNNAN: mount Heechanmen, near Lankong, at 3000 metres (*Delavay*!). Herb. Kew.

60. **Pedicularis Potanini,** *Maxim. in Mél. Biol.* xii. p. 848, n. 87.

EASTERN KANSUH: wood on the northern side of mount Tschagola, near the village of Terjga (*Potanin* ex *Maximowicz*).

61. **Pedicularis Przewalskii,** *Maxim. in Mél. Biol.* x. p. 84, et xii. p. 787, n. 2. fig. 2.

WESTERN KANSUH: alpine meadows along the river Tetung (*Przewalski*!); NORTHERN SZECHUEN (*Potanin*!). Herb. Kew.

Northern Tibet.

62. **Pedicularis recurva,** *Maxim. in Mél. Biol.* xii. p. 838, n. 76. fig. 59.

SZECHUEN: valleys of the Heiho and Ksernzo (*Potanin*!); YUNNAN: Likiang, at the foot of the glacier, at 3800 metres (*Delavay* ex *Maximowicz*). Herb. Kew.

63. **Pedicularis refracta,** *Maxim. in Mél. Biol.* xi. p. 289, et xii. p. 892, n. 159.

KWEICHOW (*Perny* ex *Maximowicz*).

64. **Pedicularis resupinata,** *Linn. Sp. Pl.* ed. 1, p. 608; *Benth. in DC. Prodr.* x. p. 581; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475, et *in Mél. Biol.* x. p. 106, et xii. p. 831, n. 69. fig. 51; *Franch. et Savat. Enum. Pl. Jap.* i. p. 351.

CHIHLI: near Jehol (*Tatarinow* ex *Maximowicz*); SHINGKING: near Moukden (*Webster*!); SHENSI: Siaowutaishan (*Hancock* ex *Maximowicz*); COREA (*Perry*! *James*!); KIANGSU (*Maingay*!); HUPEH: Patung district (*A. Henry*!). Herb. Kew.

Throughout Siberia, Mongolia, and Mandshuria to Kamtschatka, the Kurile Islands, and Japan.

65. **Pedicularis Rex,** *Clarke* ex *Maxim. in Mél. Biol.* xii. p. 875, n. 138.

YUNNAN: at Tsangshan, above Tali (*Delavay* ex *Maximowicz*); KWEICHAU (*Perny* ex *Maximowicz*).

Eastern India and Burma.

66. **Pedicularis rigida,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 872, n. 132.

YUNNAN: in woods on the mountains above Tapintze (*Delavay*!). Herb. Kew.

67. **Pedicularis rhodotricha**, *Maxim. in Mél. Biol.* x. p. 43. n. 83.

Pedicularis trichoglossa, *Franchet, Pl. David.* ii. p. 105, non *Hook. f.* fide *Maxim.*

SZECHUEN: district of Moupin at 5000 metres (*David* ex *Franchet*); YUNNAN: mount Koualapo, above Hokin, at 3500 metres (*Delavay*!). Herb. Kew.

68. **Pedicularis Roborowskii**, *Maxim. in Mél. Biol.* xi. p. 281, et xii. p. 814, n. 43. fig. 29.

WESTERN KANSUH (*Przewalski*); NORTHERN SZECHUEN: mountains on the Neruku river above the forest-line (*Potanin* ex *Maximowicz*).

69. **Pedicularis rudis**, *Maxim. in Mél. Biol.* x. p. 102, et xii. p. 845, n. 86. fig. 67.

WESTERN KANSUH: alpine region in many localities (*Przewalski*!); EASTERN KANSUH and NORTHERN SZECHUEN: in the valley of the Heiho (*Potanin*!); HUPEH: Fang (*A. Henry*!). Herb. Kew.

70. **Pedicularis rupicola**, *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 890, n. 156.

YUNNAN: Likiang, on mount Sueecham at 4000 metres (*Delavay* ex *Maximowicz*).

71. **Pedicularis** (§ **Anodonta**) **salviæflora**, *Franchet*, n. sp.

Caulis gracilis usque bimetralis, inter sepes quasi sarmentosus, plantis innixus, ramosissimus, ramis oppositis patentibus vel reflexis, pube brevi glandulisque vestitus. *Folia* subopposita, scabrida, profunde pinnatifida, subpinnatisecta, segmentis ovato-lanceolatis ala angusta incisa confluentibus, lobatis, lobis ovatis argute denticulatis; bracteæ longiter petiolatæ, incisæ. *Flores* valde dissiti, oppositi, unde racemus longissimus; calyx scabridus, tubulosus, vix ad medium subæqualiter lobatus, lobis linearibus, obtusis, apice nunc denticulatis; corolla rosea, 3 mill. longa, profunde bilabiata, hians, tubo sensim ampliato intus pubescens; galea erecta, brevis, apice villosula, fronte declivi; labium expansum trilobum, galeæ æquilongum. *Capsula* 15–18 mill. longa, e basi late ovata acuta, calyce paulo accreto longior.

YUNNAN: in bushy places above Tapintze at 2000 metres (*Delavay*, 3123!). Herb. Kew.

72. **Pedicularis Scolopax,** *Maxim. in Mél. Biol.* x. p. 282, et xii. p. 814, n. 44. fig. 30.

KANSUH: western alpine regions of the Hoangho (*Przewalski* ex *Maximowicz*).

Northern Tibet.

73. **Pedicularis semitorta,** *Maxim. in Mél. Biol.* xii. p. 813, n. 41. fig. 28.

KANSUH: both eastern and western localities (*Potanin* !). Herb. Kew.

74. **Pedicularis sigmoidea,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 796, n. 24. fig. 11.

YUNNAN: mount Koualapo, near Hokin, at 3000 metres (*Delavay* !). Herb. Kew.

75. **Pedicularis Sima,** *Maxim. in Mél. Biol.* xi. p. 284, et xii. p. 880, n. 142. fig. 107.

KANSUH: both eastern aud western localities; SZECHUEN: valley of the Heiho (*Potanin* ex *Maximowicz*).

76. **Pedicularis siphonantha,** *D. Don, Prodr. Fl. Nep.* p. 95; *Benth. in DC. Prodr.* x. p. 565; *Hook. f. Fl. Brit. Ind.* iv. p. 313, excl. syn. nonnul.; *Maxim. in Mél. Biol.* xii. p. 796, n. 22.

SZECHUEN: district of Moupin (*David* ex *Maximowicz*).

North India.

77. **Pedicularis spicata,** *Pall. It.* iii. *App.* p. 738, t. S. f. 2 B, ex *Maxim. in Mél. Biol.* x. p. 97, et xii. p. 886, n. 152.

CHIHLI: Jehol (*Tatarinow* ex *Mxaimowicz*); SHANSI: Siaowutaishan (*Hancock* ex *Maximowicz*). ; HUPEH: Fang (*A. Henry* !). Herb. Kew.

Dahuria, Mongolia, and Mandshuria.

78. **Pedicularis striata,** *Pall. It.* iii. p. 226, t. R. f. 2; *DC. Prodr.* x. p. 582; *Maxim. in Mél. Biol.* x. p. 123, et xii. p. 910, n. 211; *Franchet, Pl. David.* p. 226.

CHIHLI: near Peking (*Moellendorff* ! *Bretschneider* !); SHANSI: Siaowutaishan (*Hancock* ex *Maximowicz*). Herb. Kew.

Dahuria, Mongolia, and Mandshuria.

79. **Pedicularis strobilacea,** *Franchet*, n. sp.

Annua; caulis præsertim superne confervoideo-pubescens, e basi

ramosa, ramis erectis; folia alterna, præter suprema longe petiolata, oblonga, supra scabrida, subtus pube crustacea vestita, profunde pinnatifida, lobis brevibus ovatis incisis vel acute dentatis; flores in racemum brevem arcte congesti, bracteis e basi dilatata ovato-lanceolatis sessilibus subtus calyceque pilis confervoideis hispidis; calyx membranaceus, ovatus, semispathaceus, lobis tribus apice breve foliaceis; corolla albida, galea purpurascente edentula pilis brevissimis conspersa, rostro incurvo; tubus calyce duplo longior, gracilis, cylindricus, superne non ampliatus; labium suborbiculare, profunde trilobum, lobis ovato-oblongis; staminum filamenta 2 glabra, 2 ad medium hispida; capsula lanceolata, acuta, calycem paulo excedens.

Semipedalis vel pedalis; corolla vix 2 cent. longa. *P. gracili* haud absimilis, sed folia alterna, flores dense racemosi, quasi capitati.

YUNNAN: in meadows, mount Yentzehay, at 3500 metres (*Delavay*, 3402, ex *Franchet*).

80. **Pedicularis superba,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 874, n. 137. fig. 102.

YUNNAN: mount Likiang at 4000 metres (*Delavay*!). Herb. Kew.

81. **Pedicularis szetschuanica,** *Maxim. in Mél. Biol.* xii. p. 892, n. 160.

EASTERN KANSUH and NORTHERN SZECHUEN: in many localities (*Potanin*!). Herb. Kew.

82. **Pedicularis Tartarinowi,** *Maxim. in Mél. Biol.* x. p. 92, et xii. p. 858, n. 116. fig. 83.

Pedicularis sp. myriophyllæ affinis, *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475.

CHIHLI: near Peking (*Tatarinow*; *Bretschneider* ex *Maximowicz*), Pohuashan (*Bullock*!). Herb. Kew.

We identify Bullock's specimen from the description, though it is perhaps hardly sufficiently distinct from *P. myriophylla*, Pall., to merit specific rank.

83. **Pedicularis tenuisecta,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 831, n. 64. fig. 46.

YUNNAN: mountain-woods above Tapintze (*Delavay*!). Herb. Kew.

84. **Pedicularis ternata,** *Maxim. in Mél. Biol.* x. p. 98, et xii. p. 880, n. 143. fig. 108.

WESTERN KANSUH (*Przewalski* ex *Maximowicz*).

Mongolia and Northern Tibet.

85. **Pedicularis torta,** *Maxim. in Mél. Biol.* xii. p. 801, n. 28. fig. 17.

EASTERN KANSUH and SZECHUEN: mount Tschagola above the forest-line, and in the valley of the Heiho (*Potanin*!), North Wushan (*A. Henry*!). Herb. Kew.

86. **Pedicularis tristis,** *Linn. Sp. Pl.* ed. 1, p. 608; *Benth. in DC. Prodr.* x. p. 580; *Maxim. in Mél. Biol.* x. p. 102, et xii. p. 844, n. 84. fig. 65.

SZECHUEN: northern part (*Potanin*!). Herb. Kew.

Siberia and Mongolia.

87. **Pedicularis tsangchanensis,** *Franchet* ex *Maxim. in Mel. Biol.* xii. p. 850, n. 92.

YUNNAN: mount Tsangshan, above Tali, at 4000 metres (*Delavay*!) Herb. Kew.

88. **Pedicularis vagans,** *Hemsl.*, n. sp. (II. Rhyncholophæ, series Resupinatæ?)

Herba perennis, insignis, siccitate nigrescens, foliis radicalibus amplis longe petiolatis bipinnatisectis omnino filiciformibus, foliis caulinis oxyacanthoideis, caulibus elongatis gracilibus debilibus vagantibus vel scandentibus. *Folia* radicalia pedalia et ultra, longe petiolata, papyracea, parcissime setulosa, circumscriptione oblongo-lanceolata, pinnata, pinnis confertis decurrentibus pinnatifidis (frondibus Lastrearum nonnullarum simillima), lobis ultimis circiter 13–17 sursum gradatim paucioribus leviter oblique deltoideis margine apiceque plus minusve setulosis; folia caulina subopposita nodis distantibus, distincte graciliterque petiolata, cum petiolo 1½–2 poll. longa, circumscriptione ovali-oblonga vel interdum fere orbicularia, sæpius inæqualiter alte 5–7-lobata simul setuloso-denticulata. *Flores* in axillis foliorum dense fasciculati, brevissime pedicellati, bracteis foliaceis stipitatis subtendi, vix pollicares, glabri; calyx tubulosus, leviter ventricosus, tubum corollæ æquans, 9-nervis, inæqualiter breviterque 5-lobatus, lobis acuminatis integris vel paucidenticulatis; corollæ tubus sursum gradatim expansus; labia subæquilonga,

superius rostratum, incurvum, inferius patens, late trilobatum, lobis subæqualibus rotundatis; stamina inclusa, filamentis filiformibus glabris; ovarium compresso-ovoideum, glabrum, stylo stamina superanti. *Capsula* ignota.

SZECHUEN: mount Omei, 4000 to 5000 feet (*Faber!*). Herb. Kew.

The fern-like radical leaves and slender climbing or trailing stems characterize this remarkable species.

89. **Pedicularis verbenæfolia,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 818, n. 50. fig. 34.

YUNNAN: meadows on mount Tsangshan at 4000 metres (*Delavay!*). Herb. Kew.

90. **Pedicularis versicolor,** *Wahlenb. in Stev. Monogr.* p. 52; *Benth. in DC. Prodr.* x. p. 578; *Maxim. in Mél. Biol.* x. p. 133, et xii. p. 918, n. 242; *Hook. f. Fl. Brit. Ind.* iv. p. 316; *Royle, Illustr. Himal. Pl.* t. 72. f. 2.

SHANSI (*Potanin!*). Herb. Kew.

Europe, North India, Tibet, and Siberia to Kamtschatka.

91. **Pedicularis verticillata,** *Linn. Sp. Pl.* ed. 1, p. 608; *Benth. in DC. Prodr.* x. p. 563; *Maxim. in Mél. Biol.* x. p. 95, excl. varr., et xii. p. 891, n. 158 (var. chinensis), et *Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475.

SHANSI: Siaowutaishan (*Hancock* ex *Maximowicz*); KANSUH: both eastern and western localities (*Przewalski! Potanin!*). Herb. Kew.

Western Europe to Kamtschatka, and in North America.

√ 92. **Pedicularis** (§ **Rhyncholopha**) **Viali,** *Franchet*, n. sp.

Perennis, elata, usque tripedalis, erecta, gracilis, parce pubescens. *Folia* alterna, ambitu ovato-lanceolata, semipedalia, pinnatisecta, rhachide superne dentato-alata; pinnæ remotæ, angustæ, pinnatifidæ, lobis inciso-dentatis, dentibus mucronulatis. *Inflorescentia* gracilis, floribus parvis breviter pedicellatis laxe longeque racemosis; bracteæ angustæ, superioribus minutis spathulatis; calyx glaber, vix ad medium usque dentatus, dentibus lanceolatis acutis; corolla albida, galea rosea, superne inflato-convexa, edentula, rostro longo tenui ascendente; labium parvum, galea triplo brevius, trilobum, lobo medio ovato, lateralibus paulo majore; tubus e calyce haud exsertus. *Capsula* calyce duplo longior, e basi ovata pyramidalis, obtusa, stylo infra apicali.

Species sui juris, labio parvo jam distinctissima.

YUNNAN: in woods above Yentzehay (*Delavay*, 3378, ex *Franchet*).

93. **Pedicularis villosula,** *Franchet*, n. sp.

P. leiandræ proxima, sed annua, folia (opposita) adhuc minora, 10–15 mill., adjuncto petiolo, vix longa; bracteæ basi cuneatæ, subpalmatifidæ; corollæ tubus calyce 3–4plo longior, 20–25 mill. longus, laxe longeque secus lineas villosus; labium late orbiculatum; staminum filamenta 2 glabra 2 ad medium villosa.

YUNNAN: Likiang, near the perpetual snow (*Delavay* ex *Franchet*).

94. **Pedicularis yunnanensis,** *Franchet* ex *Maxim. in Mél. Biol.* xii. p. 851, n. 93.

YUNNAN: mount Tsangshan, above Tali, at 4000 metres (*Delavay*!). Herb. Kew.

1. **Melampyrum roseum,** *Maxim. Prim. Fl. Amur.* pp. 210 et 475; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 460; *Franchet, Pl. David.* p. 226.

Melampyrum ciliare, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 122.
Melampyrum jedoense, *Miq. l. c.* teste *Maxim. in sched. in Herb. Kew.*
Melampyrum pratense, *Hemsl. in Journ. Bot.* 1876, non *Linn.*

KIANGSI: Kiukiang (hb. *Forbes*!); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*!); COREA: Chemulpo and other localities (*Perry*! *Carles*! *James*!); COREAN ARCHIPELAGO (*Oldham*, 646!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

From Dr. Henry's notes, this is very variable in the colour of the flowers, being either white, lilac, purple, or red; and the floral leaves are entire or more or less ciliated or fringed.

96. OROBANCHACEÆ.

1. **Æginetia indica,** *Roxb. Pl. Corom.* i. p. 63, t. 91, et *Fl. Ind.* iii. p. 30; *DC. Prodr.* xi. p. 43; *Benth. Fl. Hongk.* p. 257; *Debeaux, Fl. Shangh.* p. 45; *Franchet, Pl. David.* p. 227; *Hook. f. Fl. Brit. Ind.* iv. p. 320; *Wight, Illustr. Ind. Bot.* t. 158 *b.* fig. 5, et *Ic. Pl. Ind. Or.* iv. t. 895.

KIANGSU: Shanghai (*Maingay*!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Foochow (*Carles*!); FORMOSA (*Oldham*, 409! *Wilford*!); KWANGTUNG: Lofaushan (*Ford*!); HONGKONG (*Champion*! *Wright*! *Urquhart*!). Mus. Brit.; Herb. Kew.

India, Malaya, Ceylon, Japan.

2. **Æginetia pedunculata**, *Wall. Pl. As. Rar.* iii. p. 13, t. 219; *DC. Prodr.* xi. p. 43; *Hance in Journ. Bot.* 1882, p. 37; *Hook. f. Fl. Brit. Ind.* iv. p. 320; *Wight, Illustr. Ind. Bot.* t. 158 *b.* fig. 6, et *Ic. Pl. Ind. Or.* t. 1421.

KWANGSI (*Mesny*, hb. *Hance*!). Mus. Brit.

India, Malaya, and Cochinchina.

1. **Boschniackia himalaica,** *Hook. f. et Thoms. in Hook. f. Fl. Brit. Ind.* iv. p. 327.

HUPEH: Fang (*A. Henry*!); SZECHUEN: summit of mount Omei (*Faber*!). Herb. Kew.

The specimens are far advanced in fruit, and may possibly be different from the Indian one, which had not previously been collected eastward of Sikkim.

1. **Phacellanthus** sp., an *P. tubulosi* var. bracteolis angustioribus, floribus minoribus magis carnosis?

HUPEH: Chienshih (*A. Henry*!). Herb. Kew.

This may prove distinct from the Japanese *P. tubulosus*, Sieb. et Zucc., of which we have only seen one specimen.

1. **Orobanche albolanata,** *Steud. Nomencl. Bot.* ed. 2, ii. p. 230.

Orobanche canescens, *Bunge, Enum. Pl. Chin. Bor.* p. 50, non *Presl in DC. Prodr.* xi. p. 34.

CHIHLI (*Bunge*!). Mus. Brit.

2. **Orobanche ammophila,** *C. A. Mey. in Ledeb. Fl. Alt.* ii. p. 454, et *Ic. Pl. Fl. Ross.* t. 389; *Reuter in DC. Prodr.* ix. p. 32; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 123; *Debeaux, Fl. Tchef.* p. 105; *Franchet, Pl. David.* p. 227, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 241.

CHIHLI: near Peking (*Bushell*!); SHANTUNG: Chefoo (*Han-*

cock! *Perry*!); SZECHUEN (*Faber*!); COREAN ARCHIPELAGO (*Oldham*, 648!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

Without dissecting the flowers it is impossible to name the species of this genus satisfactorily; yet we believe that *O. albolanata*, Steud., *O. ombrochares*, Hance, and *O. pycnostachya*, Hance, may belong to *O. ammophila*, C. A. Mey. On the other hand, there are more or less imperfect specimens of four or five distinct species from China in the Kew Herbarium; but it would involve too great an expenditure of time to deal with them here.

[*Orobanche caryophyllacea*, Bunge (Enum. Pl. Chin. Bor. p. 50), is an obscure plant, probably different from the European species to which this name is commonly given.]

3. **Orobanche ombrochares,** *Hance in Journ. Linn. Soc.* xiii. p. 84, et *in Journ. Bot.* 1873, p. 152.

CHIHLI: mountains west of Peking (*Williams*! *Bretschneider*!). Mus. Brit.; Herb. Kew.

4. **Orobanche pycnostachya,** *Hance in Journ. Linn. Soc.* xiii. p. 84, et *in Journ. Bot.* 1873, p. 152; *Franchet, Pl. David.* p. 226.

CHIHLI: mountains west of Peking (*Bretschneider*!), Jehol (*David* ex *Franchet*). Mus. Brit.; Herb. Kew.

1. **Cistanche salsa,** *Benth. et Hook. f. Gen. Pl.* ii. p. 983.

Phelipæa salsa, *C. A. Mey. in Ledeb. Fl. Alt.* ii. p. 461, et *Ic. Pl. Fl. Ross.* t. 376; *Reuter in DC. Prodr.* xi. p. 12.

KANSUH: south of the Hoangho (*Piasezki* ex *Maximowicz* in litt.).

Siberia.

97. LENTIBULARIEÆ.

1. **Utricularia bifida,** *Linn. Sp. Pl.* ed. 1, p. 18; *DC. Prodr.* viii. p. 21; *Oliver in Journ. Linn. Soc.* iii. p. 182; *Benth. Fl. Hongk.* p. 256; *Henriques in Bol. Soc. Brot.* iii. p. 145; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 332; *Bot. Mag.* t. 6689.

Utricularia diantha, *A. DC. Prodr.* viii. p. 21, excl. syn. nonnul.

CHINA: without locality (*Nelson*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang (*A. Henry*!); KWANGTUNG: Pakhoi

(*Playfair*!); HONGKONG (*Wilford*! *Wright*! *Hinds*! *Champion*!); COREA (*Carles*!). Mus. Brit.; Herb. Kew.

India, Malaya, and Japan.

2. **Utricularia cærulea,** *Linn. Sp. Pl.* ed. 1, p. 18; *Oliver in Journ. Linn. Soc.* iii. p. 179, non *DC.*; *Benth. Fl. Hongk.* p. 256.

Utricularia uliginosa, *Benth. in Hook. Kew Journ. Bot.* iv. p. 299, non *Vahl.*

KWANGTUNG (*Tate*!); HONGKONG (*Wilford*! *Wright*! *Champion*!). Mus. Brit.; Herb. Kew.

Southern India and Ceylon.

3. **Utricularia exoleta,** *R. Br. Prodr. Fl. Nov. Holl.* p. 430; *DC. Prodr.* viii. p. 7; *Hance in Journ. Linn. Soc.* xiii. p. 115; *Benth. Fl. Austral.* iv. p. 526; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 329.

Utricularia diantha, *Rœm. et Schult. Syst. Veg.* i. *Mant.* p. 169, non *DC. Prodr.* viii. p. 21; *Oliver in Journ. Linn. Soc.* iii. p. 176; *Benth. Fl. Hongk.* p. 256; *Wight, Ic. Pl. Ind. Or.* t. 1569.

HONGKONG (*Wilford*! *Hinds*! *Champion*!). Mus. Brit.; Herb. Kew.

India, Malaya, and Australia.

4. **Utricularia flexuosa,** *Vahl, Enum. Pl.* i. p. 198; *DC. Prodr.* viii. p. 24; *Oliver in Journ. Linn. Soc.* iii. p. 175; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 329; *Benth. Fl. Hongk.* p. 255.

Utricularia extensa, *Hance in Walp. Ann.* iii. p. 3.

Utricularia fasciculata, *Roxb. Fl. Ind.* i. p. 143; *Wight, Ic. Pl. Ind. Or.* t. 1568.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); SZECHUEN: Hokiang (*Faber*!); KWANGTUNG: Whampoa (*Hance*, 931!), without locality (*Ford*! *Wenyon*!); HONGKONG (*Wilford*!). Mus. Brit.; Herb. Kew.

Widely spread in India, Ceylon, Malaya, and Australia.

5. **Utricularia Harlandi,** *Oliver in Benth. Fl. Hongk.* p. 257.

HONGKONG (*Harland*! *Wilford*!). Herb. Kew.

6. **Utricularia intermedia,** *Hayne in Schrad. Journ.* 1800, fasc. i. p. 18, t. 5; *DC. Prodr.* viii. p. 7; *Franch. et Savat. Enum. Pl. Jap.* i. p. 298.

COREA: Changpeishan (*James*!). Herb. Kew.

Western Europe to Japan, and in North America.

7. **Utricularia orbiculata,** *Wall.* ex *A. DC. Prodr.* viii. p. 18; *Oliver in Journ. Linn. Soc.* iii. p. 187; *Benth. Fl. Hongk.* p. 256; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 334.

FORMOSA (*Oldham*, 411!); HUPEH: Ichang and neighbourhood, and South Tunghu (*A. Henry*!); HONGKONG (*Wright*!). Herb. Kew.

8. **Utricularia racemosa,** *Wall.* ex *A. DC. Prodr.* viii. p. 21; *Oliver in Journ. Linn. Soc.* iii. p. 186; *Benth. Fl. Hongk.* p. 256; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 333; *Henriques in Bol. Soc. Brot.* iii. p. 145.

SHANTUNG (*Maingay*!); KWANGTUNG: Macao, common (*Silva* ex *Henriques*); HONGKONG (*Wilford*! *Champion*!); COREA (*Carles*!). Mus. Brit.; Herb. Kew.

India, Ceylon, Malaya, and Cochinchina.

98. GESNERACEÆ.

1. **Cyrtandra Fortunei,** *Clarke in DC. Monogr. Phanerog.* v. 1. p. 251.

CHINA: without locality (*Fortune*, 59!). Herb. Kew.

1. **Æschynanthus acuminatus,** *Wall.* ex *R. Br. in Benn. Pl. Jav.* p. 116; *A. DC. Prodr.* ix. p. 263; *Clarke, Comm. et Cyrt. Beng.* t. 45, et *in DC. Monogr. Phanerog.* v. 1. p. 30, var. β. chinensis.

Æschynanthus chinensis, *Gardn. et Champ. in Hook. Kew Journ. Bot.* i. (1849) p. 328.

Æschynanthus bracteatus, *Benth. Fl. Hongk.* p. 258, non *Wall.*

HONGKONG (*Wright*! *Champion*! *Wilford*! *Lamont*!). Mus. Brit.; Herb. Kew.

The typical plant is common in Eastern India.

2. **Æschynanthus apicidens,** *Hance in Journ. Bot.* 1883, p. 167; *Clarke in DC. Monogr. Phanerog.* v. 1. p. 288, nomen tantum.

KWANGTUNG: Taiping on the Lienchau river (*B. C. Henry*, hb. *Hance*, 22056!). Mus. Brit.

✓ 1. **Lysinotus ophiorrhizoides,** *Hemsl.*, n. sp.

Suffrutex, ut videtur, epiphyticus vel supra rupes repens et

radicans, caulibus usque bipedalibus paucifoliis, cortice stramineo. *Folia* pauca ad medium, pauca ad apicem caulis conferta, breviter petiolata, membranacea, suboblique oblongo-lanceolata, maxima usque ad 6 poll. longa, sed sæpius breviora, utrinque attenuata, acuta, remote obscureque serrulata, parvissime minuteque setulosa, subtus purpurea, venis primariis lateralibus utrinque circiter 8 suboppositis curvatis et inter se anastomosantibus subtus elevatis ferrugineis. *Pedunculi* puberuli, graciles, circiter pollicares, interdum bipollicares, 3–4-flori, bracteis amplis semiconnatis coloratis alabastris includentibus (sed cito deciduis) instructis. *Flores* fere glabri, circiter 1¼ poll. longi, brevissime pedicellati; calycis segmenta lata, apice fere rotundata, ut videtur colorata; corolla angusta, leviter curvata; stamina fertilia 2, inclusa. *Capsula* linearis, 2–3-pollicaris.

SZECHUEN: mount Omei, at 4000 to 5000 feet (*Faber*!). Herb. Kew.

Much nearer the Indian *L. serratus*, D. Don, than the other Chinese species.

2. **Lysinotus pauciflorus,** *Maxim. in Mél. Biol.* ix. p. 366; *Franch. et Savat. Enum. Pl. Jap.* i. p. 327; *S. Moore in Journ. Bot.* 1875, p. 231; *Clarke in DC. Monogr. Phanerog.* v. 1. p. 59.

CHEKIANG: Ningpo mountains (*Faber*!), without locality (*Fortune*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Fang, Patung, Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: mount Omei (*Faber*!), South Wushan (*A. Henry*!). Mus. Brit.; Herb. Kew.

Japan.

1. **Isanthera discolor,** *Maxim. in Mél. Biol.* ix. p. 372; *Clarke in DC. Monogr. Phanerog.* v. 1. p. 192.

FORMOSA (*Ford*! *Oldham*, 380, ex *Maximowicz*). Herb. Kew.

Philippine Islands.

1. **Phyllobœa sinensis,** *Oliver in Hook. Ic. Pl.* xviii. t. 1721.

HUPEH: Ichang, Fang, and Chungyang (*A. Henry*!). Herb. Kew.

1. **Oreocharis aurantiaca,** *Franchet in Bull. Mens. Soc. Linn. Par.* 1887, p. 716.

YUNNAN: on humid rocks above Tapintze (*Delavay* ex *Franchet*).

2. **Oreocharis Auricula,** *Clarke in DC. Monogr. Phanerog.* v. 1. p. 65, t. 6.

Didymocarpus Auricula, *S. Moore in Journ. Bot.* 1875, p. 223; *Hemsl. op. cit.* 1876, p. 209.

KIANGSI: Kiukiang (*Shearer*! *Forbes*!). Mus. Brit.; Herb. Kew.

3. **Oreocharis Benthami,** *Clarke in DC. Monogr. Phanerog.* v. 1. p. 63, t. 5; *Hance in Journ. Bot.* 1883, p. 165.

Didymocarpus Oreocharis, *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 230; *Maxim. in Mél. Biol.* ix. p. 369.

KWANGTUNG: damp rocks at the top of the White Cloud mountains and Tingushan (*Sampson*!), Pakwan mountains (*Hance*, 7561!), without locality (*Ford*!). Mus. Brit.; Herb. Kew.

4. **Oreocharis Delavayi,** *Franchet in Bull. Mens. Soc. Linn. Par.* 1887, p. 715.

YUNNAN: at the foot of Yanginshan near Lankong (*Delavay* ex *Franchet*).

5. **Oreocharis ? filipes,** *Hance in Journ. Bot.* 1883, p. 166; *DC. Monogr. Phanerog.* v. 1. p. 288 (nomen tantum).

KWANGTUNG: beneath overhanging rocks in the defile of Yeungtin, Lienchau river (*B. C. Henry*, hb. *Hance*, 22137). Mus. Brit.

6. **Oreocharis Maximowiczii,** *Clarke in DC. Monogr. Phanerog.* v. 1. p. 63.

Didymocarpus lanuginosus, *Maxim. in Mél. Biol.* ix. p. 368, non *Wall.*, teste *Clarke.*

SOUTH CHINA (*Seniawin* ex *Maximowicz*).

This is probably not specifically different from *Didissandra lanuginosa*, Clarke, in spite of the discrepancies in the descriptions. With regard to the locality, Hance (Journ. Bot. 1883, p. 165) gives it as North China, and Clarke the same.

1. **Didissandra lanuginosa,** *Clarke in DC. Monogr. Phanerog.* v. 1. p. 66, et *in Hook. f. Fl. Brit. Ind.* iv. p. 355.

Didymocarpus lanuginosa, *Wall.*; *R. Br. in Benn. Pl. Jav. Rar.* p. 119; *DC. Prodr.* ix. p. 268; *Clarke, Comm. et Cyrt. Beng.* t. 67; *Hance in Journ. Linn. Soc.* xiii. p. 85, et *in Journ. Bot.* 1883, p. 165; *Franchet, Pl. David.* p. 227.

CHIHLI: mountains near Peking (*David* ex *Hance*); HUPEH: Ichang on vertical face of rocks, South Patung, and Nanto and mountains to the northward (*A. Henry*!). Mus. Brit.; Herb. Kew.

North India, from Simla to Khasia.

2. **Didissandra Mihieri,** *Franchet in Bull. Mens. Soc. Linn. Par.* 1885, p. 450.

KWEICHAU (*Perny* ex *Franchet*).

✓ 3. **Didissandra saxatilis,** *Hemsl.*, n. sp.

Herba acaulis, longe ferrugineo-pilosis. *Folia* subrosulata, longissime petiolata, crassiuscula, ovato-oblonga, absque petiolo usque ad 4 poll. longa, sed sæpius circiter bipollicaria et interdum minora, grosse serrato-crenata, interdum duplicato-serrata, basi late rotundata; petiolus gracilis, usque ad 5 poll. longus. *Scapi* plures, 1–5-flori, graciles, folia æquantes vel superantes. *Flores* flavi (teste *Henry*) graciliter pedicellati, suberecti, circiter pollicares; calyx pilosus, subinæqualiter alte 5-fidus, 2½–3 lineas longus, lobis ovatis obtusis; corolla extus plus minusve pilosula, intus papillosa, anguste subcylindrica, bilabiata, labio superiore integro oblongo rotundato, labio inferiore trilobato, lobis lateralibus rotundatis, lobo intermedio minore bifido; stamina 4, inclusa, supra medium tubi affixa, filamentis leviter dilatatis glabris, antheris per paria connatis; ovarium albo-tomentosum, stylo brevissimo antheras vix attingens. *Capsula* circiter sequipollicaris (1–2 poll. longa), clavata, glabrescens, loculicide dehiscens; semina minuta.

HUPEH: Patung, Kuei, and Fang, on vertical cliffs (*A. Henry*!); SZECHUEN: South Wushan, on dry rocks (*A. Henry*!). Herb. Kew.

✓ Var.? **microcalyx,** *Hemsl.*; gracilior, foliis minoribus ovalibus regulariter alte crenatis, calyce minimo, corolla ignota, capsula graciliore glabra.

SZECHUEN: South Wushan (*A. Henry*!). Herb. Kew.

Except in the particulars indicated, this is so like *D. saxatilis*, Hemsl., that we think it must be a variety of the same.

4. **Didissandra sesquifolia,** *Clarke in Hook. Ic. Pl.* xviii. t. 1797.

SZECHUEN: mount Omei, at one place only (*Faber*!). Herb. Kew.

This is almost exactly the counterpart of *Chirita monophylla*, Clarke, but it is placed in this genus because it has four apparently fertile stamens. As a matter of fact, the shorter pair have smaller anthers than the others, and in *Chirita bifolia*, D. Don, the lower pair are almost as fully developed. But as Mr. Clarke asserts (DC. Monogr. Phanerog. v. 1. p. 8) that the character of 2 or 4 stamens is absolute for each species of Cyrtandreæ, we refrain from disturbing the limits of the genera, especially as we have no better basis to suggest.

5. **Didissandra speciosa,** *Hemsl.*, n. sp.

Herba perennis, acaulis, speciosa. *Folia* rosulata, crassa, plus minusve dense albido-hirsuta vel strigillosa (pilis rectis appressis), oblongo-spathulata, in petiolum longum attenuata, maxima cum petiolo 5 poll. longa, interdum ovalia vel fere orbicularia et 1–1½ poll. longa, serrulata vel duplicato-serrulata, vix acuta, venis primariis utrinque 5–6 crassis oppositis sat conspicuis. *Scapi* plures, 1–5-flori, sed sæpius 2-flori, graciles, folia superantes, sæpius glanduloso-pilosi. *Flores* rosei, purpurei, vel cærulei (teste *Henry*), simul intus antice maculati, graciliter nutantes, maximi bipollicares; calyx glanduloso-pilosus, 5-partitus, segmentis ovato-lanceolatis subacutis 2–3 lineas longis; corolla pilis flaccidis parce vestita, late ventricosa, declinata, bilabiata, labio superiore fere erecto breviter bifido, labio inferiore majore recto subæqualiter trilobato, lobis rotundatis; stamina 4, basi corollæ affixa, longe inclusa, filamentis deorsum leviter dilatatis parce pilosulis, antheris per paria connatis; ovarium puberulum, stylo stamina 2 longiora vix æquanti. *Capsula* fere teres, sursum leviter incrassata, circiter 2½ poll. longa, loculicide dehiscens; semina minuta, numerosissima.

HUPEH: Patung, Nanto, Hsingshan and Tunghu, mostly on the face of perpendicular cliffs (*A. Henry*!). Herb. Kew.

A very handsome little plant with beautifully spotted flowers similar in size and shape to the common foxglove.

1. **Primulina Tabacum,** *Hance in Journ. Bot.* 1883, p. 169; *DC. Monogr. Phanerog.* v. 1. p. 288, nomen tantum; *Bot. Mag.* t. 7117.

Kwangtung: Tali, Lienchau river (*B. C. Henry*, hb. *Hance*, 22094 !), without locality (*Ford* !). Mus. Brit.; Herb. Kew.

1. **Petrocosmea sinensis,** *Oliver in Hook. Ic. Pl.* xviii. t. 1716.

Hupeh: Ichang and immediate neighbourhood, growing on the surface of rocks in caves and glens, with the leaves closely pressed against the rock (*A. Henry* !). Herb. Kew.

1. **Petrocodon dealbatus,** *Hance in Journ. Bot.* 1883, p. 167; *DC. Monogr. Phanerog.* v. 1. p. 288, nomen tantum.

Hupeh: on cliffs, South Patung and Changyang (*A. Henry* !); Kwangtung: near Tsinglin on the Lienchau river (*B. C. Henry*, hb. *Hance*, 22123 !). Mus. Brit.; Herb. Kew.

1. **Didymocarpus demissa,** *Hance in Journ. Bot.* 1883, p. 166; *DC. Monogr. Phanerog.* v. 1. p. 288, nomen tantum.

Kwangtung: on rocks near Saingau on the Lienchau river (*B. C. Henry*, hb. *Hance*, 22142 !). Mus. Brit.

√ 2. **Didymocarpus Fordii,** *Hemsl.*, n. sp.

Herba acaulis, perennis, fere tota albido-villosa. *Folia* crassa, ovato-spathulata, usque ad 6 poll. longa, apice fere rotundata, basi in petiolum brevem attenuata, integra vel obscure dentata, supra strigillosa, venis immersis obscuris. *Scapi* foliis breviores, graciles, 2–6-flori, bracteis parvis linearibus instructis. *Flores* circiter pollicares, breviter pedicellati; calyx villosus, subæqualiter 5-partitus, segmentis linearibus acutissimis 2½–3 lineas longis; corolla extus puberula, angusta, leviter ventricosa vel curvata, valde inæqualiter bilabiata, labio superiore brevissimo suberecto bifido, labio inferiore trilobato lobis subæqualibus; stamina 2, inclusa, glabra, ultra medium tubi corollæ affixa. *Capsulæ* annotinæ tantum visæ semipollicares, acutæ, 4-valvæ.

Kwangtung: without locality (*Ford*, 130 !). Herb. Kew.

Not greatly resembling any species that we have seen.

√ 3. **Didymocarpus? Hancei,** *Hemsl.*, n. sp.

Herba perennis, subacaulis. *Folia* conferta, crassa, coriacea, rigida, breviter petiolata, oblongo-lanceolata, cum petiolo usque ad 3½ poll. longa, utrinque attenuata, sed vix acuta, crebre crenato-serrata, hispidula, venis primariis lateralibus paucis crassis atque costa crassa subtus elevatis ferrugineo-setulosis. *Scapi* graciles, folia vix superantes, puberuli, dichotome ramosi, circiter 6-flori, bracteis brevibus lineari-oblongis instructi. *Flores* pallide roseo-lilacini (*Ford*), circiter 9 lineas longi, suberecti, breviter pedicellati; calyx puberulus, æqualiter alte 5-fidus, fere 5-partitus, segmentis crassis lineari-oblongis obtusis circiter 3 lineas longis; corollæ puberulæ tubus angustus, fere cylindricus; corollæ limbus ampliatus, valde inæqualiter bilabiatus, labio superiore brevissimo bilobato, lobis rotundatis, labio inferiore elongato trilobato, lobis rotundatis intermedio longiore; stamina 2, inclusa vel brevissime exserta; ovarium glabrum, stylo crasso puberulo stamina æquanti. *Capsula ignota.*

KWANGTUNG: North river, cultivated specimens from the Hongkong botanic garden (*Ford*!). Herb. Kew.

This is so distinct in habit that if the capsule should afford any distinctive character it might form a genus, as genera are constituted in this order.

/ 4. **Didymocarpus rotundifolia,** *Hemsl.*, n. sp.

Herba acaulis, perennis? *Folia* distincte petiolata, crassa, ut videtur subcarnosa, longe villosa (pilis multicellulatis), orbicularia vel rotundato-cordata, 1–2 poll. diametro, integra, undulata, vel interdum obscure crenata, basi interdum subtruncata interdum leviter obliqua, venis primariis paucis subtus distinctis; petiolus crassus, lamina brevior. *Scapi* plures, 1–6-flori, graciles, usque ad 9 poll. alti, glanduloso-pilosi, bracteis parvis linearibus. *Flores* ut videtur purpurei vel cærulei longe graciliterque pedicellati, circiter pollicares nutantes; calyx pilosulus, fere æqualiter 5-partitus, segmentis lineari-lanceolatis acutissimis 3–4 lineas longis; corolla a basi gradatim dilatata ventricosa declinata inæqualiter bilabiata, lobis fere æquilatis rotundatis; stamina 2 antica ascendentia, leviter exserta, filamentis medio semel tortis supra medium glanduloso-pilosulis, infra medium insigniter dilatatum; ovarium dense hirsutum, stylo stamina æquanti. *Capsula* (matura non visa) linearia, acuta, sesquipollicaris, puberula.

KWANGTUNG: North river (*Ford*, 106!). Herb. Kew.

This might, perhaps, with equal consistency be placed in *Chirita.*

5. **Didymocarpus stenanthos,** *Clarke in Hook. Ic. Pl.* xviii. t. 1799.

SZECHUEN: mount Omei at 2500 to 4000 ft. (*Faber*!). Herb. Kew.

6. **Didymocarpus,** sp. n. Aff. *D. aurantiacæ*, flores carent.

KWANGTUNG: without locality (*Ford*, 132!). Herb. Kew.

Foliage similar to *D. rotundifolius*, Hemsl., but very distinctly crenate and borne on relatively long petioles.

1. **Chirita anachoreta,** *Hance in Ann. Sc. Nat.* 5^me^ série, v. p. 231; *Clarke in DC. Monogr. Phanerog.* v. 1. p. 115; *Maxim. in Mél. Biol.* ix. p. 370.

KWANGTUNG: near the Buddhist temple Filoitz on the North river (*Sampson*, hb. *Hance*, 11377!), Lofaushan, 600 to 900 ft. (*Ford*!). Mus. Brit.; Herb. Kew.

2. **Chirita cortusifolia,** *Hance in Journ. Bot.* 1883, p. 324; *DC. Monogr. Phanerog.* v. 1. p. 288, nomen tantum.

CHEKIANG: near Wenchau (*Stronach*, hb. *Hance*, 22178!). Mus. Brit.

3. **Chirita eburnea,** *Hance in Journ. Bot.* 1883, p. 168; *DC. Monogr. Phanerog.* v. 1. p. 288, nomen tantum.

HUPEH: Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!); KWANGTUNG: Saingan, Lienchau river (*B. C. Henry*, hb. *Hance*, 22129!), without locality (*Ford*!). Mus. Brit.; Herb. Kew.

4. **Chirita Fauriei,** *Franchet in Bull. Mens. Soc. Linn. Par.* 1885, p. 450.

KWEICHAU (*Perny* ex *Franchet*).

5. **Chirita Juliæ,** *Hance in Journ. Bot.* 1883, p. 168; *DC. Monogr. Phanerog.* v. 1. p. 288, nomen tantum.

KWANGTUNG: Lienchau river (*B. C. Henry*, hb. *Hance*, 22077!). Mus. Brit.

6. **Chirita macrosiphon,** *Hance in Ann. Sc. Nat.* 5^me^ série, v. p. 231; *Clarke in DC. Monogr. Phanerog.* v. 1. p. 130.

KWANGTUNG: Tingushan (*Sampson*, hb. *Hance*, 7562!). Mus. Brit.

7. **Chirita obtusa,** *Clarke in DC. Monogr. Phanerog.* v. 1. p. 114.

FOKIEN: Amoy interior (*Swinhoe*!); KWANGTUNG: Lofaushan at 800 feet (*Ford*!). Herb. Kew.

8. **Chirita sinensis,** *Lindl. Bot. Reg.* 1844, t. 59; *Hook. Kew Journ. Bot.* i. p. 141, in adnot.; *Walp. Ann.* iii. p. 98; *Benth. Fl. Hongk.* p. 259; *Maxim. in Mél. Biol.* ix. p. 369; *Clarke in DC. Monogr. Phanerog.* v. 1. p. 130; *Bot. Mag.* t. 4284.

KWANGTUNG: cultivated specimens from plants brought from the North river (*Ford*!); HONGKONG (*Wright*! *Champion*! *Urquhart*! *Wilford*!). Mus. Brit.; Herb. Kew.

1. **Hemibœa follicularis,** *Clarke in Hook. Ic. Pl.* xviii. sub tab. 1798.

KWANGTUNG: without locality (*Ford*, 248, 371!). Herb. Kew.

2. **Hemibœa Henryi,** *Clarke in Hook. Ic. Pl.* xviii. t. 1798.

HUPEH: Ichang, Hsingshan, Nanto, and Changyang (*A. Henry*, 2107, 4215, 4894, 6493!). Herb. Kew.

Dr. Henry notes that a decoction of the root with spirits is used in the case of snake-bites.

3. **Hemibœa subcapitata,** *Clarke in Hook. Ic. Pl.* sub tab. 1798.

HUPEH: Ichang, Patung and neighbourhood (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!). Herb. Kew.

This should, perhaps, be regarded as a variety of *H. Henryi*, Clarke.

1. **Bœa Clarkeana,** *Hemsl.*, n. sp.

Herba acaulis, pluriscaposa. *Folia* longe petiolata, crassa, subcoriacea, ovata, ovalia vel interdum fere orbicularia, interdum oblonga, sæpe leviter obliqua, absque petiolo usque ad 4 poll. longa sed sæpius 2–2½ poll. longa, regulariter crenulata, obtusa, basi truncata, subcordata vel cuneata, supra strigilloso-hispidula, subtus pubescentia, venis primariis atque costa crassis subtus elevatis; petiolus crassus, teres, pubescens, usque ad 4 poll. longus sed

sæpius brevior. *Scapi* plures, pubescentes, crassiusculi, folia superantes, cum capsulis interdum 9–10 poll. alti, apice cymosi, cymis circiter 6-floris subdichotomis, bracteis parvis. *Flores* pallide rosei (teste *Henry*), 7–8 lineas longi, laterales longiuscule pedicellati; calyx hispidulus, latus, subcampanulatus, 3–4 lineas longis, lobis fere æqualibus deltoideis vix acutis; corolla pubescens, late cylindrica, subæqualiter 5-lobata, lobis rotundatis; stamina 2, inclusa, glabra, filamentis crassis teretibus basi corollæ affixis, antheris magnis agglutinatis; stylus crassus, stigmate dilatato unilaterali. *Capsula* torta, hispidula, teres, circiter sesquipollicaris.

HUPEH: Nanto and mountains to the northward and South Tunghu (*A. Henry*!). Herb. Kew.

✓ 2. **Bœa crassifolia,** *Hemsl.*, n. sp.

Herba acaulis, pluriscaposa. *Folia* sessilia, crassissima, coriacea, oblongo-spathulata, usque 6 poll. longa (sæpius 3–4 poll.), apice rotundata, deorsum attenuata, margine undulata, supra viridia, glabra, evenosa, subtus densissime albido vel fulvo-furfuracea, venis primariis costaque crassissimis valde elevatis. *Scapi* plures, graciles, plus minusve araneoso-hirsuti, folia sæpius paullo superantes, interdum breviores, apice laxe cymosi, 3–7-flori, bracteis minutis vel obsoletis. *Flores* cærulei, pulcherrimi (teste *Henry*), graciliter pedicellati, circiter semipollicares; calyx minutus, pubescens alte 5-fidus, lobis angustis obtusis; corolla glabra, lata, obliqua, declinata, ventricosa, fere æqualiter breviterque 5-lobata, lobis latis rotundatis undulatis; stamina 2, inclusa, glabra, medio corollæ affixa, adscendentia, filamentis aurantiacis valde incrassatis, antheris maximis arcte agglutinatis; ovarium glabrum, stylo glabro paullo exserto, stigmate parvo fere truncato. *Capsula* annotina tantum visa, torta, teres, circiter sesquipollicaris.

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 3960!); SZECHUEN: Wushan gorge (*Faber*!). Herb. Kew.

Nearest *B. hygrometrica*, R. Br.

3. **Bœa dictyoneura,** *Hance in Journ. Bot.* June 1883, p. 169.

Bæa Hancei, *Clarke in DC. Monogr. Phanerog.* v. 1. p. 144 (Sept. 1883).

KWANGTUNG: along the Lienchau river (*B. C. Henry*, hb. *Hance*, 21741!). Mus. Brit.; Herb. Kew.

4. **Bœa hygrometrica,** *R. Br. in Benn. Pl. Jav. Rar.* p. 120, et *Ann. Sc. Nat.* 2me série, xiii. p. 166; *DC. Prodr.* ix. p. 271; *Franchet, Pl. David.* p. 228; *Maxim. in Mél. Biol.* ix. p. 370; *Clarke in DC. Monogr. Phanerog.* v. 1. p. 145.

Dorcoceras hygrometrica, *Bunge, Enum. Pl. Chin. Bor.* p. 54; *Deless. Ic. Pl. Sel.* v. t. 95.

CHIHLI: near Peking (*Bunge*! *Bushell*! *Tatarinow*! *Williams*! *Bretschneider*!), Jehol (*David* ex *Franchet*); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); SHENSI or KANSUH: Tsunghi range (*Piasezki* ex *Maximowicz*); KWANGTUNG: North river (*Ford*!). Mus. Brit.; Herb. Kew.

5. **Bœa rufescens,** *Franchet in Bull. Mens. Soc. Linn. Par.* 1885, p. 449.

KWEICHAU (*Simon* ex *Franchet*).

6. **Bœa Swinhoii,** *Hance in Ann. Sc. Nat.* 5me série, v. p. 231; *Clarke in DC. Monogr. Phanerog.* v. 1. p. 142.

FORMOSA: south-west (*Swinhoe*!), Takow (*Playfair*!). Mus. Brit.; Herb. Kew.

Borneo.

99. BIGNONIACEÆ.

1. **Oroxylum indicum,** *Vent. Dec. Gen. Nov.* p. 8; *Kurz, Forest Fl. Burma,* ii. p. 237; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 378.

Bignonia indica, *Linn. Sp. Pl.* ed. 1, p. 625; *Roxb. Fl. Ind.* iii. p. 110; *Clarke's Reprint*, p. 495.

Calosanthes indica, *Blume, Bijdr.* p. 760; *DC. Prodr.* ix. p. 177; *Wight, Ic. Pl. Ind. Or.* t. 1337.

Bignonia pentandra, *Lour. Fl. Cochinch.* p. 379.

HONGKONG (*Maclean*, hb. *Hance*!); HAINAN (*A. Henry*!). Mus. Brit.; Herb. Kew.

Throughout India, Malaya, and Cochinchina.

1. **Catalpa Bungei,** *C. A. Mey. Diss.* 1837, p. 3; *DC. Prodr.* ix. p. 226; *Kurz in Journ. Bot.* 1873, p. 193; *Hance in Journ.*

Bot. 1882, p. 37; *Franchet, Pl. David.* p. 229, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 236; *Debeaux, Fl. Shangh.* p. 45.

Catalpa syringæfolia, *Bunge, Enum. Pl. Chin. Bor.* p. 45, non *Sims.*

CHIHLI: near Peking (*Bunge*! *Bretschneider*! *Hancock*!); SHANTUNG: Chefoo, cult.? (*Fauvel* ex *Franchet*); CHEKIANG: Ningpo (*Hancock*!); KWEICHAU (*Mesny*, hb. *Hance*); SHENSI (*Piasezki* ex *Maximowicz* in litt.); YUNNAN (*Anderson* ex *Kurz*). Mus. Brit.; Herb. Kew.

2. **Catalpa Kæmpferi,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 480; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 122; *Franch. et Savat. Enum. Pl. Jap.* i. p. 326; *Bot. Mag.* t. 6611; *Lavallé, Ic. Sel. Arb. Hort. Segrez.* p. 33, t. 10.

HUPEH: Ichang (*A. Henry*, 1391!). Herb. Kew.

Japan, though it is uncertain whether it be indigenous.

1. **Tecoma grandiflora,** *Loiseleur, Herb. Amat. Gen.* v. t. 286; *DC. Prodr.* ix. p. 223; *Hance in Journ. Bot.* 1879, p. 69, et 1880, p. 300.

Campsis adrepens, *Lour. Fl. Cochinch.* p. 378; *Seem. Journ. Bot.* 1863, p. 19, et 1867, p. 373; *Franchet, Pl. David.* p. 228.

Bignonia grandiflora, *Thunb. Fl. Jap.* p. 253; *Bot. Mag.* t. 1398; *Andrew's Bot. Rep.* t. 493.

Bignonia chinensis, *Lam. Encycl.* i. p. 423.

Incarvillea grandiflora, *Poir. in Dict. Sc. Nat.* xxiii. p. 53.

CHIHLI: near Peking (*Bretschneider*!); NORTH CHINA: without locality (*Fortune*!); KIANGSI: Kiukiang (*David* ex *Franchet*); HUPEH: Ichang and immediate neighbourhood, in among rocks (*A. Henry*!); SOUTH CHINA (ex *Loureiro*); HAINAN: Siang river (*Bullock*, hb. *Hance*!). Mus. Brit.; Herb. Kew.

Japan.

1. **Dolichandrone Cauda-felina,** *Benth. et Hook. f. Gen. Pl.* ii. p. 1046.

Spathodea Cauda-felina, *Hance in Journ. Bot.* 1872, p. 257, et 1874, p. 177.

HAINAN: various localities (*Swinhoe*! *Hancock*!), and cultivated specimens from Canton (*Hance*!) and Hongkong (*Ford*!). Mus. Brit.; Herb. Kew.

The flowers differ considerably in size, the largest, both wild and cultivated, are six inches across when flattened out on paper.

1. **Stereospermum sinicum,** *Hance in Journ. Bot.* 1882, p. 16.
FORMOSA: Kelung (*Ford*!); KWANGTUNG: North river (*Ford*!); HONGKONG: cultivated specimens (*Ford*!). Mus. Brit.; Herb. Kew.

2. **Stereospermum,** sp., an *S. hyposticti* var. petalis non crispatis?
HAINAN (*A. Henry*!). Herb. Kew.

There are very imperfect specimens of two other species of *Stereospermum* in Dr. Henry's Hainan collection.

1. **Incarvillea compacta,** *Maxim. in Mél. Biol.* xi. p. 294.
KANSUH: Upper Hoangho (*Przewalski* ex *Maximowicz*).

2. **Incarvillea sinensis,** *Lam. Encycl.* iii. p. 243; *DC. Prodr.* ix. p. 237; *Bunge, Enum. Pl. Chin. Bor.* p. 45; *Franchet, Pl. David.* p. 229.
CHIHLI: near Peking (*Bunge*! *Bushell*! *Bretschneider*! *Hancock*!); SHINGKING: Kaichow to Kinchow (*Ross*!). Mus. Brit.; Herb. Kew.
Mandshuria.

100. PEDALINEÆ.

1. **Trapella sinensis,** *Oliver in Hook. Ic. Pl.* t. 1595; *Oliver fil. in Ann. Bot.* ii. p. 75, tt. 5–9; *Illustr. Jap. Pl.* t. 8.
HUPEH: Ichang and immediate neighbourhood (*A. Henry*!). Herb. Kew.

1. **Sesamum indicum,** *Linn. Sp. Pl.* ed. 1, p. 634; *DC. Prodr.* ix. p. 250; *Debeaux, Fl. Shangh.* p. 43, et *Fl. Tchef.* p. 105; *Franchet, Pl. David.* p. 229; *Lour. Fl. Cochinch.* p. 382; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 387.
CHIHLI and SHINGKING southward to KWANGTUNG and FORMOSA: cultivated and wild (*Swinhoe*! *Shearer*! *A. Henry*! *Playfair*! *Bretschneider*! *Faber*!). Mus. Brit.; Herb. Kew.
Generally cultivated in the tropics and wild, or more or less colonized; but believed to be indigenous in Asia only.

August 16. Price 3s.

THE JOURNAL

OF

THE LINNEAN SOCIETY.

Vol. XXVI. BOTANY. No. 175.

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NOTICE.

This Part forms the second portion of Vol. XXVI., and is in continuation of Messrs. Forbes and Hemsley's "Index Floræ Sinensis." Vol. XXVII. is in course of simultaneous issue. The Parts of each already published are as under :—

Vol. XXVI. Nos. 173–174.
(Nos. 175–180 are reserved for the continuation of this work.)

Vol. XXVII. No. 181. (No. 182 is in the press.)

Attention to this announcement is specially requested, to prevent application for unpublished numbers.

The ensuing Meetings of the present Session will be held as under :—

1890. Thursday, April 17
" May 1

1890. Saturday (*Anniversary*) May 24
Thursday, June 5
" " 19

The Chair will be taken at Eight o'clock in the Evening precisely at every Meeting, excepting on the 24th May, the day appointed for the Anniversary Elections, when the Chair will be taken at Three o'clock in the afternoon.

101. ACANTHACEÆ.

1. **Thunbergia fragrans,** *Roxb. Corom. Pl.* i. p. 47, t. 67, et *Fl. Ind.* iii. p. 33; *Clarke's Reprint*, p. 469; *DC. Prodr.* xi. p. 57; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 390; *Hance in Journ. Bot.* 1878, p. 13.

HONGKONG (*Urquhart!*); HAINAN (*Sampson! Swinhoe! Hancock! A. Henry!*). Mus. Brit.; Herb. Kew.

Throughout India, Ceylon, and Malaya to North Australia.

2. **Thunbergia grandiflora,** *Roxb. Fl. Ind.* iii. p. 34; *Clarke's Reprint*, p. 470; *DC. Prodr.* xi. p. 54; *Benth. Fl. Hongk.* p. 260; *Bot. Mag.* t. 2366; *Bot. Reg.* t. 495.

HONGKONG (*Urquhart! Champion!*); HAINAN: near Hoihow (*Hancock! A. Henry!*). Herb. Kew.

Bombay Presidency, Eastern India, and Malaya.

1. **Ebermaiera concinnula,** *Hance in Journ. Bot.* 1868, p. 300.

FORMOSA: without locality (*Swinhoe!*); Tamsui (*Oldham*, 377!), Kelung (*Ford!*); KWANGTUNG: Taichushan (*Sampson!*). Mus. Brit.; Herb. Kew.

1. **Hygrophila salicifolia,** *Nees in DC. Prodr.* xi. p. 92; *Benth. Fl. Hongk.* p. 261; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 407; *Wight, Ic. Pl. Ind. Or.* t. 1490.

Hygrophila assurgens, *Nees in DC. Prodr.* xi. p. 90?

FORMOSA (*Oldham! Playfair!*); HUPEH: Ichang and immediate neighbourhood (*A. Henry!*); KWANGTUNG: Whampoa (*Hance!*), Lantao Island (*Ford!*); HONGKONG (*Champion!*). Mus. Brit.; Herb. Kew.

Throughout India, Ceylon, and Malaya.

1. **Ruellia flagelliformis,** *Roxb. Fl. Ind.* iii. p. 47; *Clarke's Reprint*, p. 474; *DC. Prodr.* xi. p. 153.

HUPEH: Ichang and immediate neighbourhood, and Nanto and mountains to the northward (*A. Henry*, 2346, 4641!); SZECHUEN: Wushan Gorge (*Faber!*). Herb. Kew.

Roxburgh described this plant very briefly, and recorded it as a native of the Moluccas; but this may have been an error. The only specimen we have seen bearing this name was grown at Kew from a plant sent thither by Dr. Scheffer, of the Buitenzorg botanic garden; and, so far as the description goes, it agrees very well with the specimen. The Chinese wild specimens we now refer to *R. flagelliformis*, Roxb., are less luxuriant, but do not present any other obvious differences.

2. **Ruellia repens,** *Linn. Mant.* p. 89; *T. Anders. in Journ. Linn. Soc.* ix. p. 460; *Clarke in Hook. Fl. Brit. Ind.* iv. p. 412; *Benth. Fl. Hongk.* p. 261; *Henriques in Bol. Soc. Brot.* iii. p. 145.

Dipteracanthus lanceolatus, *Nees in DC. Prodr.* xi. p. 124.

KWANGTUNG (*Silva* ex *Henriques*); HONGKONG (*Wright*!). Mus. Brit.; Herb. Kew.

Malay peninsula and archipelago.

3. **Ruellia seclusa,** *S. Moore in Journ. Bot.* 1876, p. 208.

KIANGSI: Kiukiang (*Forbes*!). Mus. Brit.; Herb. Kew.

4. **Ruellia venusta,** *Hance in Journ. Bot.* 1868, p. 92.

KWANGTUNG: shady woods above the cloister of Tiloitsz on the North river (*Sampson* and *Hance*, 13767!), without locality (*Ford*!). Mus. Brit.; Herb. Kew.

1. **Dædalacanthus nervosus,** *T. Anders. in Journ. Linn. Soc.* ix. p. 487; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 418; *Hance in Journ. Bot.* 1878, p. 13.

Justicia nervosa, *Vahl, Enum. Pl.* i. p. 164; *Bot. Mag.* t. 1358.

Eranthemum nervosum, *R. Br. Prodr. Fl. Nov. Holl.* p. 477; *Nees in DC. Prodr.* xi. p. 445.

Eranthemum pulchellum, *Andrews, Bot. Rep.* t. 88, non *Roxb.*

KWANGTUNG: shady rocky woods along the West river (*Sampson*, hb. *Hance*!). Mus. Brit.

Tropical India, and cultivated in many other tropical countries.

1. **Hemigraphis chinensis,** *T. Anders. mscpt. in herb. Kew.*

Ruellia chinensis, *Nees in DC. Prodr.* xi. p. 147.

Strobilanthes scaber, *Hance in Journ. Bot.* 1878, p. 231, non *Nees*.

CHINA: without locality (*Parkes*!); KWANGTUNG: near Canton (*Parry*!), Dane's Island, Whampoa (*A. Hance*!), Pakwan (*Sampson*, hb. *Hance*, 7575!). Mus. Brit.; Herb. Kew.

1. **Strobilanthes apricus,** *T. Anders. in Benth. Fl. Hongk.* p. 262.

Gutzlaffia aprica, *Hance in Hook. Kew Journ. Bot.* i. p. 143; *Walp. Ann.* iii. p. 214.

Phlebophyllum apricum, *Benth. in Hook. Kew Journ. Bot.* v. p. 131.

Hongkong (*Champion*! *Urquhart*! *Wilford*! *Hance*!). Mus. Brit.; Herb. Kew.

✓ 2. **Strobilanthes debilis,** *Hemsl.*, n. sp.

Herba perennis, ramosa, procumbens, molliter pilosa, *Ruelliæ prostratæ* similis sed gracilior et debilior, caulibus teretibus gracillimis flaccidis, internodiis quam folia brevioribus. *Folia* longe graciliterque petiolata, tenuia, mollia (albo-maculata, *Ford*), ovali-oblonga vel interdum fere orbicularia, cum petiolo usque ad 1½ poll. longa, obtusa, obscure pauci-crenulata, venis obscuris. *Flores* lilacini, pulchri (teste *Ford*), purpurei (teste *Henry*), in axillis foliorum superiorum solitarii, subsessiles, haud pollicares, bracteolis 2 segmentis calycinis simillimis et fere æquantibus suffulti; calycis segmenta 5, subæqualia, anguste lanceolata, vix acuta, ciliato-fimbriata, circiter 2½ lineas longa; corollæ parce pilosulæ tubo angusto subite ventricoso expanso, lobis brevibus late rotundatis subæqualibus; stamina 4, leviter exserta, filamentis vix dilatatis parce pilosulis, antheris muticis liberis; ovarium pilis paucis apicem versus instructum, loculis biovulatis. *Capsula* calycem paullo excedens, apice parce albo-pilosa, sæpius 2-sperma; semina orbicularia, valde compressa, pubescentia.

Hupeh: Chienshih (*A. Henry*!); Kwangtung: Lofaushan (*Ford*!). Herb. Kew.

Similar to *S. radicans*, T. Anders., but having slender, herbaceous, weak stems and fringed calyx-lobes.

3. **Strobilanthes flaccidifolius,** *Nees in DC. Prodr.* xi. p. 194; *T. Anders. in Journ. Linn. Soc.* ix. p. 481; *Hance in Journ. Linn. Soc.* xiii. p. 116; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 468; *Bretschn. Notes on some Botanical Questions on Export Trade of China*, p. 8; *G. Watt, Econom. Prod. Ind.* part 2, p. 59; *Bot. Mag.* t. 6947.

Strobilanthes Championi, *T. Anders. in Benth. Fl. Hongk.* p. 261.

Dipteracanthus? calycinus, *Champ. in Hook. Kew Journ. Bot.* v. p. 133; *Walp. Ann.* v. p. 649.

Strobilanthes flaccidus, *Mann, Assam Forest Report,* 1876–7, par. 135.

Ruellia indigofera, *Griffith, Journ. of Trav. in India*, p. 237.
Ruellia indigotica, *Fortune, Residence among the Chinese*, p. 158.
Ruellia Cusia, *Hamilt. in Wall. Cat.* n. 2386.
Goldfussia Cusia, *Nees in Wall. Pl. As. Rar.* iii. p. 88, *et in DC. Prodr.* xi. p. 175.

KWANGTUNG: North river (*Ford*!); HONGKONG (*Wilford*! *Champion*! *Harland*!). Mus. Brit.; Herb. Kew.

Eastern India and Burma.

This plant is extensively cultivated both in India and China, and yields the blue dye known in India as Room or Assam Indigo, and fully described by Fortune, in the place cited, as one of the Indigo Plants of China.

On the authority of the late Dr. Hance ('China Review,' Jan.–Feb. 1881) another Acanthaceous plant is cultivated around Canton for its blue dye. It is named Lam Yip or Blue Leaf; and Hance states that it is quite different from *Strobilanthes flaccidifolius*, Nees, but in the absence of flowers he was unable to determine the genus.

4. **Strobilanthes dimorphotrichus,** *Hance in Journ. Bot.* 1883, p. 355.

KWANGTUNG: in a damp wood at Fukshanman, on the Lienchau river (*B. C. Henry*, hb. *Hance*, 22110!). Mus. Brit.

5. **Strobilanthes formosanus,** *S. Moore in Journ. Bot.* 1877, p. 294.

FORMOSA: Tamsui (*Oldham*, 378, 406!). Herb. Kew.

✓ 6. **Strobilanthes Henryi,** *Hemsl.*, n. sp.

Herba perennis, humilis (circiter pedalis), ramosa, caulibus gracilibus flaccidis procumbentibus hispidulis usque bipedalibus. *Folia* tenuia fere membranacea, distincte petiolata, ovata vel ovato-lanceolata, cum petiolo 1–3 poll. longa, acuminata sed vix acuta, basi cuneata, crenato-denticulata, supra parcissime strigillosa, subtus breviter pubescentia, venis primariis lateralibus utrinque 5–6 arcuatis sat conspicuis. *Flores* lilacini (*Henry*), parvi (vix pollicares), spicati, per paria oppositi, spicis simplicibus angustis brevissime pedunculatis axillaribus terminalibusque 2–4-pollicaribus hispidulis; bracteæ spathulatæ, apice rotundatæ, calycem subæquantes; bracteolæ bracteis similes sed dimidio breviores; calycis segmenta lanceolato-oblonga, obtusa, puberula, corollæ tubum fere æquantia; corolla parcissime puberula, recurva, tubo

subite ampliato, lobis latis fere truncatis; stamina 2, inclusa, filamentis parce villosulis. *Capsulæ* loculi, 2-ovulati; semina hirsuta.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 2918, 4269!). Herb. Kew.

Similar to the Indian *S. consanguineus*, Clarke, which is a more robust plant with compound spikes of flowers.

7. **Strobilanthes japonicus,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 124; *Franch. et Savat. Enum. Pl. Jap.* i. p. 356.

Ruellia japonica, *Thunb. Fl. Jap.* p. 254, et *Ic. Pl. Jap.* Decas 5, t. 9; *DC. Prodr.* xi. p. 153.

SZECHUEN: Min river (*Faber*!). Herb. Kew.

Japan.

✓ 8. **Strobilanthes latisepalus,** *Hemsl.*, n. sp.

Herba perennis, repens, fere omnino glabra, caulibus numerosis erectis simplicibus gracillimis 9–15 poll. altis. *Folia* longe petiolata, membranacea, lanceolata vel ovato-lanceolata, cum petiolo $1\frac{1}{2}$–4 poll. longa, utrinque valde attenuata, acutissima, paucicrenata, venis primariis paucis obscuris. *Flores* pallide cærulei (teste *Henry*), pedunculis axillaribus vel pseudo-terminalibus brevibus gracilibus 1–3-floris bracteis foliaceis calyce brevioribus instructis; calycis fere 5-partiti segmenta subæqualia, foliacea, oblongo-lanceolata, circiter semipollicaria, obtusa, integra vel hic inde dentata vel lobulata, parcissime puberula; corolla circiter sesquipollicaris, leviter curvata, intus extusque glabra, lobis brevibus rotundatis; stamina leviter exserta; ovarium glabrum, loculis biovulatis.

HUPEH: on cliffs in woods at Hsingshan (*A. Henry*, 6502!). Herb. Kew.

Very near the *S. Wallichii*, Nees, which has relatively long narrow sepals.

9. **Strobilanthes oliganthus,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 124; *Franch. et Savat. Enum. Pl. Jap.* i. p. 356.

CHEKIANG: Ningpo mountains (*Faber*!). Herb. Kew.

Japan.

10. **Strobilanthes pentstemonoides,** *T. Anders. in Journ. Linn. Soc.* ix. p. 477, pro parte, ex *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 460.

Goldfussia pentstemonoides, *Nees in Wall. Pl. As. Rar.* iii. p. 88, et *in DC. Prodr.* xi. p. 175; *Wight, Ic. Pl. Ind. Or.* t. 1510.

HUPEH: Ichang gorge (*Maries*!), Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 1100, 1123, 2074, 2171, 2709, 3052, 7289!); SZECHUEN: Chungching (*Bourne*!). Herb. Kew.

Subtropical North India, from Nepal eastward.

11. **Strobilanthes radicans,** *T. Anders. in Benth. Fl. Hongk.* p. 262.

Ruellia tetrasperma, *Champ. in Hook. Kew Journ. Bot.* v. p. 132; *Walp. Ann.* v. p. 649.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 87, 324, 1007, 1543, 2795!); HONGKONG (*Champion*! *Urquhart*!). Mus. Brit.; Herb. Kew.

12. **Strobilanthes Wallichii,** *Nees in Wall. Pl. As. Rar.* iii. p. 87, et *in DC. Prodr.* xi. p. 193; *T. Anders. in Journ. Linn. Soc.* ix. p. 477; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 471.

Goldfussia Thomsoni, *Hook. in Bot. Mag.* t. 5119.

HUPEH: Chienshih (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!). Herb. Kew.

North India, from Nepal eastward.

The flowers of the Chinese specimens are said to vary from white to pale blue and purple.

1. **Acanthus ilicifolius,** *Linn. Sp. Pl.* p. 639 (errore 939); *Lour. Fl. Cochinch.* p. 395; *Benth. Fl. Hongk.* p. 263; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 481.

Dilivaria ilicifolia, *Nees in Wall. Pl. As. Rar.* iii. p. 98, et *in DC. Prodr.* xi. p. 268; *Wight, Ic. Pl. Ind. Or.* t. 459.

KWANGTUNG: Macao and neighbourhood (*Vachell*! *Gaudichaud*!); HONGKONG (*Champion*!); HAINAN: environs of Hoihow (*A. Henry*!) Mus. Brit.; Herb. Kew.

Maritime districts of India, Ceylon, Malaya, China, and tropical Australia.

1. **Barleria cristata,** *Linn. Sp. Pl.* ed. 1, p. 636; *DC. Prodr.* xi. p. 229; *Benth. Fl. Hongk.* p. 262; *Hance in Journ. Linn. Soc.* xiii. p. 115; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 488; *Henriques in Bol. Soc. Brot.* iii. p. 145; *Bot. Mag.* t. 1615.

Barleria nepalensis, *Nees in Wall. Pl. As. Rar.* iii. p. 91, et *in DC. Prodr.* xi. p. 228.

KWANGTUNG: Whampoa (*Hance*, 290!), without locality (*Wenyon*!), Pakhoi (*Playfair*!); HONGKONG (*Hinds*!); HAINAN: in various localities (*Swinhoe*! *Hancock*! *A. Henry*!). Mus. Brit.; Herb. Kew.

Widely spread in tropical Asia, but commonly cultivated. It is probably indigenous in Hainan.

[*Barleria procumbens*, Lour. (Fl. Cochinch. p. 377), recorded from waste places near Canton, has not been identified.]

[*Crossandra undulæfolia*, Salisb., syn. *C. infundibuliformis*, Nees, a common South-Indian and Ceylon plant, is cultivated in South China.]

1. **Asystasia violacea**, *Dalz.* ex *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 494.

KWANGTUNG: North river (*Ford*!). Herb. Kew.

South India.

This should perhaps be reunited with *A. chelonioides*, Nees.

2. **Asystasia chinensis**, *S. Moore in Journ. Bot.* 1875, p. 228.

CHEKIANG; Ningpo mountains (*Faber*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang, Fang, Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: Mount Omei (*Faber*!). Mus. Brit.; Herb. Kew.

1. **Eranthemum bicolor**, *Schrank, Hort. Monac.* t. 8, ex *Nees in DC. Prodr.* xi. p. 456.

Justicia bicolor, *Sims, Bot. Mag.* t. 1423.
Eranthemum aspersum, *Hook. Bot. Mag.* t. 5711.

CHINA: without locality (*Fortune*, 19!). Herb. Kew.

Widely spread in the Malay Archipelago.

2. **Eranthemum crenulatum**, *Wall.* ex *Lindl. in Bot. Reg.* t. 879; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 497; *Hance in Journ. Bot.* 1879, p. 13; *Franchet, Pl. David.* p. 230.

KIANGSI; Kiukiang (*David* ex *Franchet*), in mountains, without precise locality (*Mœllendorf* ex *Hance*); HAINAN (*Bullock* ex *Hance*!). Mus. Brit.

Khasia.

3. **Eranthemum palatiferum**, *Nees*, var. ?, *in Wall. Pl. As. Rar.* iii. p. 108, et *in DC. Prodr.* xi. p. 457; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 498.

Justicia palatifera, *Wall. Pl. As. Rar.* i. p. 80, t. 92.

HAINAN: various localities both on the coast and in the interior (*A. Henry*!). Herb. Kew.

Eastern India.

1. **Codonacanthus pauciflorus,** *Nees in Wall. Pl. As. Rar.* iii. p. 90, et *in DC. Prodr.* xi. p. 103; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 500; *Benth. Fl. Hongk.* p. 267.

FOKIEN: Amoy (*Swinhoe*!); FORMOSA: Tamsui (*Oldham*, 376!); HONGKONG (*Urquhart*! *Champion*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Eastern India.

1. **Lepidagathis hyalina,** *Nees in Wall. Pl. As. Rar.* iii. p. 95, et *in DC. Prodr.* xi. p. 252; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 521; *Benth. Fl. Hongk.* p. 263.

CHINA: without locality (*Staunton*!); FORMOSA: Taiwan (*Playfair*!); KWANGTUNG: Macao (*Gaudichaud*!); HONGKONG (*Champion*! *Wilford*! *Seemann*!). Mus. Brit.; Herb. Kew.

Very widely spread in India and Malaya, and extending to Ceylon.

1. **Clinacanthus Burmanni,** *Nees in DC. Prodr.* xi. p. 511; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 524.

HAINAN (*Swinhoe*!). Herb. Kew.

Malacca, Java, and Borneo.

1. **Justicia Adhatoda,** *Linn. Fl. Zeyl.* p. 16; *Benth. Fl. Hongk.* p. 264; *Bot. Mag.* t. 861.

Adhatoda vasica, *Nees in Wall. Pl. As. Rar.* iii. p. 103, et *in DC. Prodr.* xi. p. 387; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 540.

KWANGTUNG: Macao (*Callery* ex *Nees*); HONGKONG (*Urquhart*!). Herb. Kew.

India, Ceylon, and Malaya.

2. **Justicia Championi,** *T. Anders. in Benth. Fl. Hongk.* p. 264; *Hance in Journ. Bot.* 1874, p. 261.

Adhatoda chinensis, *Benth. in Hook. Kew Journ. Bot.* v. p. 134; *Walp. Ann.* v. p. 664.

KWANGTUNG: Lofaushan (*Ford*!); HONGKONG (*Champion*! *Wright*! *Wilford*!). Mus. Brit.; Herb. Kew.

3. **Justicia diffusa,** *Willd. Sp. Pl.* i. p. 87, var. prostrata, *Roxb.* ex *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 538.

Rostellularia diffusa, *Nees in Wall. Pl. As. Rar.* iii. p. 100, et *in DC. Prodr.* xi. p. 371.

HAINAN: Hoihow (*A. Henry*!). Mus. Brit.; Herb. Kew.

North and South India, Ceylon, and Malay peninsula.

4. **Justicia Gendarussa,** *Linn. f. Suppl.* p. 85; *Benth. Fl. Hongk.* p. 264; *Bot. Reg.* t. 635; *Henriques in Bol. Soc. Brot.* iii. p. 145.

Gendarussa vulgaris, *Nees in Wall. Pl. As. Rar.* iii. p. 104, et in *DC. Prodr.* xi. p. 410; *Wight, Ic. Pl. Ind. Or.* t. 468.

FORMOSA: Tamsui (*Oldham*, 379!), Takow (*Playfair*!); KWANGTUNG: Whampoa (*Hance*, 6049!), Pakhoi (*Playfair*!); HONGKONG (*Wright*!). Mus. Brit.; Herb. Kew.

India, Ceylon, and Malaya to the Philippine Islands.

5. **Justicia leptostachya,** *Hemsl.*, n. sp.

Herba erecta, fere glabra, facie *J. decussatæ*, caulibus tetragonis a nodo ad nodum lateris 2 alternis bifariam pubescentibus. *Folia* ampla, distincte petiolata, tenuia, papyracea, ovato-lanceolata, maxima visa cum petiolo semipedalia, longe acuminata, basi cuneata, integra, simul obscurissime sinuato-lobulata, supra parce minutissimeque strigillosa, subtus pallidiora, præcipue secus costam venasque strigillosa, venis primariis lateralibus paucis arcuatis sat conspicuis. *Flores* parvi, 4–5 lineas longi, sessiles, in fasciculos parvos densos oppositos distantes graciliter spicato-paniculati, spicis vel paniculis pauciramosis gracilibus hispidulis terminalibus usque pedalibus; bracteæ et bracteolæ parvæ, calyce breviores; calycis segmenta subæqualia, anguste lanceolata vel fere lineares, acutissima, corollæ dimidium fere æquantes; corolla puberula, recta, tubo latiusculo, labiis subæquilongis, superiore oblongo integro apice rotundato recto vel leviter incurvo stamina incluso, inferiore lato subæqualiter trilobato, lobis rotundatis patentibus vel leviter recurvis, palato striato-venoso; stamina 2, filamentis glabris, antheræ loculo inferiore distincte appendiculato; ovarium glabrum, stylo filiformi incluso glabro. *Capsula* clavata, puberula, circiter semipollicaris, sæpius 4-sperma; semina atro-fusca, leviter muricata.

KWANGTUNG: without locality (*Ford*, 322!). Herb. Kew.

v 6. **Justicia latiflora,** *Hemsl.*, n. sp.

Herba vel suffrutex foliis inflorescentia *J. Atkinsoni* similis, caulibus simplicibus vel pauciramosis tortuosis adscendentibus, 1–2 poll. altis tetragonis obsolete puberulis. *Folia* longe petiolata, fere membranacea, lanceolata, ovata vel interdum suborbicularia, cum petiolo usque ad 5 poll. longa, sæpius acuminata, vix acuta, basi cuneata, interdum longe attenuata, utrinque præcipue secus costa venasque plus minusve hispidula, venis primariis lateralibus 8–10 arcuatis conspicuis; petiolus gracilis, interdum 2–2½ poll. longus. *Flores* pulchelli, in spicas densas bipollicares terminales brevissime pedunculatas conspicue bracteatas dispositi; bracteæ coloratæ, puberulæ, latæ, ovales vel ellipticæ, subite breviter acuminatæ, floribus plus quam dimidio breviores; calyx puberulus, alte subæqualiter 5-fidus, segmentis lanceolatis acutis 3–4 lineas longis; corolla pallide rubra, striata (teste *Henry*), extus pubescens, lata sed vix ultra 9–10 lineas longa, costata vel plicata, labio superiore late rotundato concavo, labio inferiore patenti late trilobato, lobulis rotundatis lateralibus angustioribus, palato insigniter elevato-venoso; stamina leviter exserta; ovarium glabrum, loculis biovulatis. *Capsula* ignota.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3412, 3412 A, 3412 B!). Herb. Kew.

7. **Justicia procumbens**, *Linn. Sp. Pl.* ed. 1, p. 15; *Hance in Journ. Linn. Soc.* xiii. p. 116; *Debeaux, Fl. Shanghai*, p. 48; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 539.

Rostellularia procumbens, *Nees in Wall. Pl. As. Rar.* iii. p. 101, et *in DC. Prodr.* xi. p. 371; *Benth. Fl. Hongk.* p. 265; *Nees in Nov. Act. Nat. Cur.* xix. Suppl. i. p. 383; *Wight, Ic. Pl. Ind. Or.* t. 1539; *Franchet, Pl. David.* p. 230.

CHINA: without locality (*Fortune*, 29!); KIANGSU: Shanghai (*Maingay*! *Carles*!); FOKIEN: Amoy interior (*Swinhoe*!); FORMOSA: various localities (*Swinhoe*! *Wilford*! *Oldham*!); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: Mount Omei at 2500 feet (*Faber*!); KWANGTUNG (*Tate*!); HONGKONG (*Hinds*!). Mus. Brit.; Herb. Kew.

India, Ceylon, Malaya, and Australia.

8. **Justicia quadrifaria**, *Wall.*; *T. Anders. in Journ. Linn. Soc.* ix. p. 514, partim, ex *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 530.

Adhatoda quadrifaria, *Nees in DC. Prodr.* xi. p. 396.

KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang, Nanto and

mountains to the northward (*A. Henry* !); SZECHUEN: Wushan Gorge (*Faber* !). Herb. Kew.

Eastern India.

9. **Justicia simplex**, *D. Don, Prodr. Fl. Nep.* p. 118; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 539.

Justicia mollissima, *Wall.*; *Kurz in Journ. Bot.* 1873, p. 193.

YUNNAN (*Anderson* ex *Kurz*); LUCHU ARCHIPELAGO (*Wright* !). Herb. Kew.

India, Malaya, and Abyssinia.

Some of the specimens referred to this species are hardly distinguishable from *J. procumbens*, Linn.

10. **Justicia ventricosa**, *Wall. Pl. As. Rar.* i. p. 80, t. 93; *Benth. Fl. Hongk.* p. 264; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 526; *Bot. Mag.* t. 2766.

KWANGTUNG: West river (*Ford* !); HONGKONG (*Wright* !). Herb. Kew.

Pegu, Tenasserim, and Siam.

[*Graptophyllum hortense*, Nees, syn. *Justicia picta*, Vahl (Bot. Mag. t. 1870), a widely cultivated plant, the native country of which is uncertain, has been queried as of Chinese origin, but we have seen no Chinese specimens.]

1. **Rungia chinensis**, *Benth. Fl. Hongk.* p. 266; *Henriques in Bol. Soc. Brot.* iii. p. 145.

KWANGTUNG (*Silva* ex *Henriques*); HONGKONG: Mount Parker (*Champion* !). Herb. Kew.

This distinct species has apparently not been found by any other collector, except Silva, on the mainland.

2. **Rungia parviflora**, *Nees in Wall. Pl. As. Rar.* iii. p. 110; *DC. Prodr.* xi. p. 469; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 550.

KWANGTUNG: hills above Pakwan (*Hance*, 6551 !), French island, Whampoa (*Hance* !), Fatshan (*Wenyon* !), North river (*Ford*, 28 !); HAINAN: environs of Hoihow (*A. Henry* !). Mus. Brit.; Herb. Kew.

Eastern and Southern India and Ceylon.

1. **Dicliptera chinensis**, *Nees in DC. Prodr.* xi. p. 477; *Benth. Fl. Hongk.* p. 266; *Henriques in Bol. Soc. Brot.* iii. p. 145.

Dicliptera cardiocarpa, *Nees in Wall. Pl. As. Rar.* iii. p. 111.

Dicliptera Burmani, *Nees, loc. cit.* p. 112.

Dicliptera Roxburghiana, *Nees, loc. cit.* p. 111, et *in DC. Prodr.* xi. p. 483; *Nees in Nov. Act. Nat. Cur.* xix. Suppl. i. p. 383; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 553, excl. synon. nonnul.

Justicia chinensis, *Linn. Sp. Pl.* ed. 1, p. 16; *Lour. Fl. Cochinch.* p. 25.

FORMOSA (*Oldham*, 374, 375 !); KWANGTUNG: Macao (*Callery* !); HONGKONG (*Wilford*! *Champion*! *Wright*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Widely spread in India, if the foregoing synonymy be correct, which, however, is doubtful, for the species has been very differently limited by different writers.

2. **Dicliptera crinita,** *Nees in DC. Prodr.* xi. p. 485.

Justicia crinita, *Thunb. in Trans. Linn. Soc.* ii. p. 338.

Dianthera japonica, *Thunb. Fl. Jap.* p. 21, t. 4.

Dicliptera Buergeriana, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 125; *Franch. et Savat. Enum. Pl. Jap.* i. p. 356; *Franchet, Pl. David.* p. 230.

Peristrophe chinensis, *Nees in DC. Prodr.* xi. p. 494?

KIANGSI: Kiukiang (*David* ex *Franchet*), Ichang and immediate neighbourhood, and Nanto and mountains to the northward (*A. Henry*, 2191!); CHINA: without locality (*Fortune*, 31 !); CHEKIANG: Ningpo district (*Forbes*!). Mus. Brit.: Herb. Kew.

Japan.

Peristrophe chinensis, Nees, is reduced to this from Fortune's authentically named specimen.

Var.? **floribunda**, *Hemsl.*; foliis minoribus, floribus numerosioribus.

HAINAN: Liaushan, 10 miles from Hoihow (*A. Henry*!). Herb. Kew.

1. **Peristrophe tinctoria,** *Nees in Wall. Pl. As. Rar.* iii. p. 113, et *in DC. Prodr.* xi. p. 493, excl. synon. nonnull.; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 556; *Hance in Journ. Bot.* 1874, p. 261, et 1879, p. 13; *G. Watt, Econ. Prod. Ind.* i. part 2, p. 47; *Bretschn. Early Res.* pp. 105 et 166.

Justicia purpurea *et* J. tinctoria, *Lour. Fl. Cochinch.* p. 25.

KIANGSU; Shanghai (*Carles* !); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1695, 3991 !); KWANGTUNG: Pakhoi (*Playfair* !); HAINAN: around Hoihow (*Bullock* !). Mus. Brit.; Herb. Kew.

India, Ceylon, and Malaya: commonly cultivated for dyeing purposes. It should probably include the Indian *P. montana*, Nees, and *P. fera*, Clarke. There are Chinese specimens collected by Dr. Henry and others having smaller flowers and obovate-spathulate bracts, which may be a variety of this, or a distinct species.

The synonymy of the Eastern species of *Dicliptera* and *Peristrophe* is very much involved, and should not be accepted without exhaustive examination.

1. **Hypoestes Cumingiana**, *Benth. et Hook. f. Gen. Pl.* ii. p. 1122, in nota sub *Peristrophe*.

Peristrophe Cumingiana, *Nees in DC. Prodr.* xi. p. 498; *Vidal, Pl. Vasc. Filip.* p. 207.

FORMOSA: south coast (*Maries* !), Taiwan (*Playfair* !). Herb. Kew.

Philippine Islands.

2. **Hypoestes purpurea**, *R. Br. Prodr. Fl. Nov. Holl.* p. 474; *Nees in DC. Prodr.* xi. p. 509; *Benth. Fl. Hongk.* p. 265; *Vidal, Pl. Vasc. Filip.* p. 207; *Henriques in Bol. Soc. Brot.* iii. p. 145.

FORMOSA: south-west district (*Swinhoe* !), Taiwan (*Playfair* !); KWANGTUNG: Macao (*Callery* !); HONGKONG (*Champion* !); KWANGSI (*Wenyon* !). Mus. Brit.; Herb. Kew.

Philippine Islands.

The specimens recorded from Assam were cultivated in the Calcutta Botanic Gardens.

3. **Hypoestes sinica**, *Miq. in Journ. de Bot. Néerl.* i. (1861), p. 117.

SOUTH-EAST CHINA: abundant in hedges (*Krone* ex *Miquel*).

4. **Hypoestes**, sp. nova? specimen mancum.

HAINAN: environs of Hoihow (*A. Henry*, 8419 !). Herb. Kew.

[*Dipteracanthus subdenticulatus*, Miq. (Journ. de Bot. Néerl. i. (1861), p. 117), and *Rostellularia trichochila*, Miq. (*loc. cit.* p. 118), from South-east China, we have not been able to recognize from the descriptions.]

102. MYOPORINEÆ.

1. **Myoporum bontioides,** *A. Gray, in Proc. Am. Acad.* vi. 1862, p. 52.

Pentacœlium bontioides, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 27, t. 3; *Franch. et Savat. Enum. Pl. Jap.* i. p. 561.

Myoporum chinense, *A. Gray in Proc. Am. Acad.* vi. 1862, p. 52; *Hance in Journ. Bot.* 1879, p. 13.

Polycœlium chinense, *A. DC. Prodr.* xi. p. 706; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 233.

CHINA: without locality (*Fortune*, 12!); FOKIEN: Amoy (*de Grijs*, hb. *Hance*, 2034!); KWANGTUNG: various localities southward to Pakhoi (*Tate*! *Bullock*!); KWANGSI: about 100 miles from Pakhoi (*Playfair*!). Mus. Brit.; Herb. Kew.

Japan.

The only Japanese specimen we have seen is indistinguishable from the Chinese, and we have followed Hance's suggestion (Ann. Sc. Nat. 5^{me} série, v. p. 234) that there is only one species concerned.

"When I was at Amoy last year I saw the present plant (not then in flower, and therefore of course indeterminable), quite covered by the sea at high tide."—*Hance* in Herb. Kew.

103. SELAGINEÆ.

1. **Lagotis brachystachya,** *Maxim. in Mél. Biol.* xi. p. 300.

KANSUH: by the upper Hoangho (*Przewalski*!). Herb. Kew.

2. **Lagotis brevituba,** *Maxim. in Mél. Biol.* xi. p. 299.

KANSUH: region of Tangut (*Przewalski*!). Herb. Kew.

3. **Lagotis glauca,** *Gærtn. in Nov. Comm. Acad. Petrop.* xiv. p. 533, t. 18. fig. 2; *Maxim. in Mél. Biol.* xi. p. 297; *Hook. f. Fl. Brit. Ind.* iv. p. 559.

Gymnandra borealis, *Pall.*, G. Pallasii, G. Gmelini, et G. Stelleri, *Cham. et Schl.* ex *Maxim. loc. cit.*

KANSUH: alpine region of the upper Hoangho (*Potanin* ex *Maximowicz*).

Mountains of Central Asia and Arctic Asia and America.

104. VERBENACEÆ.

1. **Phryma Leptostachya,** *Linn. Sp. Pl.* ed. 1, p. 601; *DC. Prodr.* xi. p. 520; *Franch. et Savat. Enum. Pl. Jap.* i. p. 355; *Hance in Journ. Bot.* 1874, p. 261; *Franchet, Pl. David.* p. 232, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 241; *Maxim. in Mél. Biol.* xii. p. 502.

CHIHLI: Peking (*Bretschneider*), foot of Mount Conolly (*Bullock* !); SHINGKING: Kaichow to Kiuchow (*Ross* !); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry* !); COREAN ARCHIPELAGO: Port Hamilton (*Oldham,* 618 !). Mus. Brit.; Herb. Kew.

North India, Mandshuria, Japan, and temperate North America, chiefly on the eastern side.

1. **Lantana Camara,** *Linn. Sp. Pl.* ed. 1, p. 627; *DC. Prodr.* xi. p. 598; *Benth. Fl. Hongk.* p. 268; *Maxim. in Mél. Biol.* xii. p. 502.

HONGKONG (*Wright* ! *Wilford* !). Mus. Brit.; Herb. Kew.

A common tropical American shrub now naturalized in many parts of the Old World.

1. **Lippia nodiflora,** *Michx. Fl. Bor.-Amer.* ii. p. 15; *DC. Prodr.* xi. p. 585; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 563; *Wight, Ic. Pl. Ind. Or.* t. 1463; *Maxim. in Mél. Biol.* xii. p. 502.

Phyla chinensis, *Lour. Fl. Cochinch.* p. 66; *DC. Prodr.* xvii. p. 296.

SZECHUEN and HUPEH to KWANGTUNG, HAINAN, and FORMOSA (*Wilford* ! *A. Henry* ! *Hance* ! *Playfair* ! *Swinhoe* ! and others). Mus. Brit.; Herb. Kew.

Cosmopolitan in tropical and warm temperate regions.

1. **Stachytarpheta indica,** *Vahl, Enum. Pl.* i. p. 206; *DC. Prodr.* xi. p. 564; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 564.

Stachytarpheta jamaicensis, *Vahl, Bot. Mag.* t. 1860.

Stachytarpha indica *et* S. jamaicensis, *Schauer in DC. Prodr.* xi. p. 564.

HONGKONG (*Urquhart* !). Herb. Kew.

Tropical Asia, Africa, and America; probably only naturalized in the Old World, and almost certainly so in China.

1. **Verbena officinalis,** *Linn. Sp. Pl.* ed. 1, p. 20; *DC. Prodr.* xi. p. 547; *Benth. Fl. Hongk.* p. 268; *Debeaux, Fl. Tchef.* p. 112, et *Fl. Shangh.* p. 48; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 565; *Maxim. in Mél. Biol.* xii. p. 503.

Verbena, sp. n.?, *Hemsl. in Journ. Bot.* 1876, p. 208.

CHINA: common from the Corea southward (*Millett*! *Champion*! *Wilford*! *Playfair*! *A. Henry*! and others). Mus. Brit.; Herb. Kew.

Very widely spread in temperate and subtropical regions.

1. **Callicarpa brevipes,** *Hance in Ann. Sc. Nat.* 5me série, v. p. 233, et *in Journ. Linn. Soc.* xiii. p. 116 (sphalmate breviceps); *Maxim in Mél. Biol.* xii. p. 509.

Callicarpa longifolia, var. brevipes, *Benth. Fl. Hongk.* p. 270.

Callicarpa longifolia, *Hook. Exot. Fl.* ii. t. 133, et *Bot. Reg.* t. 864, nec *Lam.*

HONGKONG (*Champion*! *Wright*! *Wilford*! *Hance*!). Mus. Brit.; Herb. Kew.

2. **Callicarpa cana,** *Linn. Mant.* p. 198; *DC. Prodr.* xi. p. 643; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 568.

Callicarpa americana, *Lour. Fl. Cochinch.* p. 70, non *Linn.*

HAINAN: various localities (*A. Henry*!). Herb. Kew.

Malay peninsula and archipelago to the Philippine Islands and North Australia.

3. **Callicarpa formosana,** *Rolfe in Journ. Bot.* 1882, p. 358; *Maxim. in Mél. Biol.* xii. p. 506.

FORMOSA: Tamsui and various other localities (*Wilford*! *Oldham*! *Swinhoe*! *Watters*! *Playfair*! *A. Henry*!). Mus. Brit.; Herb. Kew.

Philippine Islands.

There is no obvious character to separate this from *C. longifolia*, Lam., and, indeed, with a very large series of specimens we have quite failed to make a satisfactory sorting into *C. formosana*, Rolfe, *C. japonica*, Thunb., *C. longifolia*, Lam., and *C. purpurea*, Juss. The specimens present almost every gradation, from small-leaved and small-flowered glabrous and hairy forms to large-leaved and large- or small-flowered glabrous or hairy forms. But without carefully studying them all we hesitate to combine them as one polymorphous species. In preference we follow Maximowicz's recent monograph as nearly as we can, leaving a large number of specimens undetermined. Franchet and Savatier (Enum. Pl. Jap. i. p. 359) seem to have entertained the same opinion.

4. **Callicarpa integrifolia,** *Champ. in Hook. Kew Journ. Bot.* v. p. 135; *Walp. Ann.* v. p. 709; *Benth. Fl. Hongk.* p. 270; *Maxim. in Mél. Biol.* xii. p. 505.

CHINA: without locality (*Millett*!); HONGKONG (*Champion*! *Wright*! *Ford*!). Mus. Brit.; Herb. Kew.

5. **Callicarpa japonica,** *Thunb. Fl. Jap.* p. 60; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 98; *Franch. et Savat. Enum. Pl. Jap.* i. p. 358; *Maxim. in Mél. Biol.* xii. p. 508; *Hook. Exot. Fl.* ii. t. 133; *Bot. Reg.* t. 864 (longifolia).

Callicarpa longifolia *a.* subglabra, *Schauer in DC. Prodr.* xi. p. 645.

COREA: Soul mountains (*Carles*!); COREAN ARCHIPELAGO (*Oldham*, 622!); LUCHU ARCHIPELAGO (*Wright* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

Japan.

6. **Callicarpa longifolia,** *Lam. Encycl.* i. p. 563; *DC. Prodr.* xiii. p. 645, excl. *β.* japonica; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 570; *Maxim. in Mél. Biol.* xii. p. 507, nec *Benth. Fl. Hongk.*

CHINA: without locality (*Fortune*!); HUPEH: Ichang, Patung, Nanto and other localities (*A. Henry*, 1185, 1551, 1946, 2155, 3107 A, 3999!); SZECHUEN: mount Omei at 3000 feet (*Faber*!); KWANGTUNG: Macao (*Callery*!); HAINAN: various localities (*A. Henry*!). Mus. Brit.; Herb. Kew.

Eastern India and Malaya to North Australia.

✓ Var.? **longissima,** *Hemsl.*; fere undique glabra nitidaque, foliis valde elongatis anguste lanceolatis usque 9 poll. longis, subtus pallidioribus parce aureo-pulverulentis ceterum glabris, cymis distincte pedunculatis, floribus minutis.—*C. longifolia*, Hance in Ann. Sc. Nat. 5^{me} série, v. p. 233, et Maxim. in Mél. Biol. xii. p. 507, vix Lam.

KWANGTUNG: near Canton (*Hance*, 4956!). Mus. Brit. Herb. Kew.

Variable as *C. longifolia* is, as limited here and in the 'Flora of British India,' the present form stands out very distinctly from all the others and should perhaps be raised to specific rank.

7. **Callicarpa macrophylla,** *Vahl, Symb.* iii. p. 13, t. 53; *DC. Prodr.* xi. p. 644; *Benth. Fl. Hongk.* p. 270; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 568; *Maxim. in Mél. Biol.* xii. p. 505.

China: without locality (*Fortune,* 84! *Millett*!); Hongkong (*Wright*!); Hainan: environs of Kiunchow (*A. Henry*!). Mus. Brit.; Herb. Kew.

Widely spread in Northern and Eastern India.

8. **Callicarpa mollis,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 526; *Franch. et Savat. Enum. Pl. Jap.* i. p. 359; *Maxim. in Mél. Biol.* xii. p. 505.

Callicarpa Zollingeriana, *Schauer in DC. Prodr.* xii. p. 505.

Corean Archipelago: locality illegible (*Oldham*!). Herb. Kew.

Japan.

9. **Callicarpa pilosissima,** *Maxim. in Mél. Biol.* xii. p. 506.

Formosa: without locality (*Oldham,* 387!). Herb. Kew.

10. **Callicarpa purpurea,** *Juss. in Ann. Mus. Hist. Nat. Par.* vii. p. 67; *Schauer in DC. Prodr.* xi. p. 645; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 98; *Maxim. in Mél. Biol.* xii. p. 509; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 240; *Franch. et Savat. Enum. Pl. Jap.* i. p. 358.

Callicarpa gracilis, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 525.

Porphyra dichotoma, *Lour. Fl. Cochinch.* p. 87.

Shantung: Chefoo (*Maingay*! *Faber*!); Kiangsi: Kiukiang (*Shearer*!); Fokien: Amoy (*Fortune,* 94!); Hupeh: Nanto and mountains to the northward (*A. Henry*!); Kwangtung: Lofaushan (*Ford*!). Mus. Brit.; Herb. Kew.

Japan and Cochinchina.

See the remarks under *C. formosana,* Rolfe.

11. **Callicarpa Reevesii,** *Wall. Cat.* n. 1830; *Schauer in DC. Prodr.* xi. p. 641; *Benth. Fl. Hongk.* p. 270; *Walp. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 381; *Maxim. in Mél. Biol.* xii. p. 505; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 568.

Callicarpa nudiflora, *Hook. et Arn. Bot. Beech. Voy.* p. 206, t. 46.

Kwangtung: various localities (*Millett*! *Vachell*! *Hance*! *Gaudichaud*! *Wenyon*!); Hongkong (*Champion*! *Wilford*! *Wright*!); Hainan: environs of Hoihow (*A. Henry*). Mus. Brit.; Herb. Kew.

Tenasserim and Singapore.

12. **Callicarpa rubella,** *Lindl. in Bot. Reg.* t. 883; *Schauer in DC. Prodr.* xi. p. 645; *Benth. Fl. Hongk.* p. 271; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 569; *Maxim. in Mél. Biol.* xii. p. 506.

Callicarpa tenuifolia, *Champ. in Hook. Kew Journ. Bot.* v. p. 135; *Walp. Ann.* v. p. 729.

Kwangtung: various localities (*Sampson*!); Hongkong (*Champion*! *Wright*!). Mus. Brit.; Herb. Kew.

Sikkim, Khasia, and Jaintea mountains, India.

13. **Callicarpa tomentosa,** *Willd. Enum. Pl. Hort. Berol.* p. 158; *Schauer in DC. Prodr.* xi. p. 647; *Hook. et Arn. Bot. Beech. Voy.* p. 205; *Benth. Fl. Hongk.* p. 269; *Maxim. in Mél. Biol.* xii. p. 505.

Callicarpa Roxburghii, *Schauer sed non* C. incana, *Roxb. fide Benth.*

China: without locality (*Fortune*, 118! *Millett*!); Fokien: Amoy (*Swinhoe*!); Hongkong (all collectors!); Kwangsi (*Wenyon*!). Mus. Brit.; Herb. Kew.

[*Callicarpa triloba*, Lour. (Fl. Cochinch. p. 70), recorded from China, is an obscure plant.]

1. **Premna formosana,** *Maxim. in Mél. Biol.* xii. p. 512.

Formosa: Tamsui (*Oldham*, 385!). Herb. Kew.

2. **Premna glabra,** *A. Gray in sched.*, ex *Maxim. in Mél. Biol.* xii. p. 512.

Luchu Archipelago (*Wright*!). Herb. Kew.

Also in the extreme south of Japan.

3. **Premna integrifolia,** *Linn. Mant. Alt.* p. 252; *Hance in Journ. Linn. Soc.* xiii. p. 116; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 574; *Wight, Ic. Pl. Ind. Or.* t. 1469.

Premna serratifolia, *Linn. Mant. Alt.* p. 253; *Schauer in DC. Prodr.* xi. p. 632; *Benth. Fl. Hongk.* p. 269; *Maxim. in Mél. Biol.* xii. p. 510.

Viburnum chinense, *Hook. et Arn. Bot. Beech. Voy.* p. 190 in nota sub *Viburno nodoso.*

CHINA: without locality (*Millett*!); FORMOSA: Taiwan and Takow (*Playfair*!); KWANGTUNG: Macao (*Callery*!); HONGKONG (*Champion*! *Wright*! *Ford*! *Hance*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Tropical Asia and Africa.

√ 4. **Premna ligustroides,** *Hemsl.*, n. sp.

Frutex dense ramosus, ramulis floriferis rigidiusculis simul gracilibus junioribus foliis floribusque plus minusve pubescentibus. *Folia* brevissime petiolata, papyracea, lanceolato-oblonga, ½–1½ poll. longa (specimen unicum, no. 592, ex Kweichau, foliis ovatis acuminatis maximis 3½ poll. longis et 2 poll. latis), obtusa, undulata, integra vel rarissime obscure 1–2-bilobulata, venis primariis utrinque sæpissime 3 inconspicuis. *Flores* flavi (teste *Faber*), parvi, vix 3 lineas longi, dense cymoso-paniculati, brevissime pedicellati, paniculis angustis sæpius 1½–2 poll. longis (in specimino majore paniculis paullo longioribus laxioribusque); calyx pubescens, brevis, subbilabiatus, dentibus obtusis 3 superioribus parum minoribus; corollæ pubescentis labium superius latum, truncato-emarginatum; labium inferius subæqualiter trilobatum, lobis rotundatis; stamina brevissime exserta. *Drupa* atra, circiter 2 lineas diametro.

SZECHUEN: Min river (*Faber*!); KWEICHAU: without locality (*Faber*!). Herb. Kew.

Characterized by the almost sessile leaves, hairiness, and very small flowers.

5. **Premna microphylla,** *Turcz. in Bull. Soc. Nat. Mosc.* 1863, ii. p. 217; *Maxim. in Mél. Biol.* xii. p. 510.

Premna japonica, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. 1865, p. 97; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 40; *Hance in Journ. Bot.* 1878, p. 111.

Premna, sp. n.?, *Hemsl. in Journ. Bot.* 1876, p. 208.

CHEKIANG: Ningpo (*Swinhoe*! *Cooper*!); KIANGSI: Kiukiang (*Forbes*!); FOKIEN: Amoy (*Fortune, 23*!); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: mount Omei at 7000 feet (*Faber*!). Mus. Brit.; Herb. Kew.

Japan.

6. **Premna staminea,** *Maxim. in Mél. Biol.* xii. p. 513.
LUCHU ARCHIPELAGO (*Tanaka* ex *Maximowicz*).

1. **Gmelina chinensis,** *Benth. Fl. Hongk* p. 272; *Hook. Ic. Pl.* xix. t. 1874.

KWANGTUNG: Lantao island, native collector (*Ford*!); HONGKONG (*Wright*!). Mus. Brit.; Herb. Kew.

Since the publication of the figure in Hooker's 'Icones Plantarum' Mr. Ford has sent excellent flowering specimens to Kew, from which we learn that the inflorescence is furnished with very deciduous foliaceous bracts.

2. **Gmelina hainanensis,** *Oliver in Hook. Ic. Pl.* in nota sub textu ad tab. 1874.

HAINAN: without locality (*B. C. Henry*, 13!). Herb. Kew.

1. **Vitex incisa,** *Lam. Encycl.* ii. p. 612, et *Illustr.* t. 541. f. 2; *Schauer in DC. Prodr.* xi. p. 684; *Bunge, Enum. Pl. Chin. Bor.* p. 52; *Debeaux, Fl. Tchef.* p. 113, et *Fl. Tients.* p. 36; *Franchet, Pl. David.* p. 232 (cum var. heterophylla), et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 241; *Maxim. in Mél. Biol.* xii. p. 516; *Bot. Mag.* t. 364.

Vitex Negundo, *Lam.*, var. incisa, *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 584.

CHIHLI: vicinity of Peking, exceedingly common (*Bunge*! *David*! *Fortune*! *Bushell*! *Bretschneider*!); SZECHUEN: Chungking (*Bourne*!); KWANGSI: on the banks of the river not far from Kweilinfoo (*Mesny*!). Mus. Brit.; Herb. Kew.

Mr. Clarke says this is common throughout India; but this was probably a slip of the pen, for most, and perhaps all, of the specimens of this variety or species from India were cultivated.

2. **Vitex heterophylla,** *Roxb. Fl. Ind.* iii. 1832, p. 75; *Wall. Pl. As. Rar.* iii. p. 15, t. 226; *Schauer in DC. Prodr.* xi. p. 686; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 585.

Vitex Loureiri, *Hook. et Arn. Bot. Beech. Voy.* p. 206, t. 48 (1841); *Benth. Fl. Hongk.* p. 273; *Hance in Journ. Linn. Soc.* xiii. p. 117; *Maxim. in Mél. Biol.* xii. p. 514.

Cornutia quinata, *Lour. Fl. Cochinch.* p. 387.

FORMOSA: Tamsui (*Oldham*, 384!); KWANGTUNG: Canton

(*Millett*!), Lofaushan (*Ford*!); HONGKONG (*Hance*, 7494!); HAINAN: near Hoihow and elsewhere (*A. Henry*!). Mus. Brit.; Herb. Kew.

Eastern India and Malaya, and Japan.

3. **Vitex Negundo,** *Linn. Sp. Pl.* ed. 1, p. 638; *Schauer in DC. Prodr.* xi. p. 684; *Benth. Fl. Hongk.* p. 273; *Franchet, Pl. David.* p. 232; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 583 (excl. var. incisa); *Bot. Mag.* t. 364; *Maxim. in Mél. Biol.* xii. p. 515.

Vitex cannabifolia, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 520; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 99; *Hemsl. in Journ. Bot.* 1876, p. 209.

CHIHLI to SZECHUEN, KWANGSI, HONGKONG, HAINAN, and FORMOSA (*Fortune*! *Wright*! *David*! *A. Henry*! *Playfair*! and numerous other collectors). Mus. Brit.; Herb. Kew.

India and Malaya to Japan and the Philippine Islands.

4. **Vitex Sampsoni,** *Hance in Journ. Bot.* 1868, p. 115; *Maxim. in Mél. Biol.* xii. p. 516.

KWANGTUNG: various localities (*Sampson*, hb. *Hance*, 1384! *Ford*!). Mus. Brit.; Herb. Kew.

[*Vitex spicata*, Lour. (Fl. Cochinch. p. 390), is an obscure plant.]

5. **Vitex trifolia,** *Linn. Sp. Pl.* ed. 1, p. 638; *Schauer in DC. Prodr.* xi. p. 683 (varietates α. trifoliolata et β. unifoliolata); *Benth. Fl. Hongk.* p. 273; *Franch. et Savat. Enum. Pl. Jap.* i. p. 360; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 583; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 240; *Maxim. in Mél. Biol.* xii. p. 514 (trifoliata).

Vitex ovata, *Thunb. Fl. Jap.* p. 257; *Hook. et Arn. Bot. Beech. Voy.* pp. 206, 268, t. 47; *Debeaux, Fl. Tchef.* p. 113.

SHANTUNG: without locality (*Maingay*!); FORMOSA (*Swinhoe*! *Wilford*! *Oldham*! *Playfair*!); KWANGTUNG: Macao and other localities (*Millett*! *Tate*!); HONGKONG (*Wright*! *Wilford*! *Champion*!); HAINAN: near Hoihow (*A. Henry*!); COREA: on the south coast close to the sea (*Perry*!); LUCHU ARCHIPELAGO (*Beechey*!). Mus. Brit.; Herb. Kew.

India and Malaya to Ceylon, Japan, the Philippine Islands, and North Australia.

6. **Vitex urceolata,** *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 585. Kwangtung: without locality (*Ford*, 303 !). Herb. Kew. Malaya.

1. **Clerodendron canescens,** *Wall. Cat.* 1804; *Schauer in DC. Prodr.* xi. p. 665; *Benth. Fl. Hongk.* p. 272; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 589; *Maxim. in Mél. Biol.* xii. p. 518; *Henriques in Bol. Soc. Brot.* iii. p. 144.

Clerodendron hæmatocalyx, *Hance in Walp. Ann.* iii. p. 238.

Clerodendron "pubescens, *Wall.*," *Walp. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 380.

Kwangtung: Macao (*Silva* ex *Henriques*); Hongkong (*Wilford*! *Wright*! *Champion*!). Mus. Brit.; Herb. Kew.

2. **Clerodendron cyrtophyllum,** *Turcz. in Bull. Soc. Nat. Mosc.* 1863, ii. p. 222; *Maxim. in Mél. Biol.* xii. p. 520.

Clerodendron amplius, *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 233; *Franchet, Pl. David.* p. 231; *Maxim. in Mél. Biol.* xii. p. 520.

Clerodendron formosanum, *Maxim. in Mél. Biol.* xii. p. 519.

Chekiang: Chusan (*Cantor*!), Ningpo mountains (*Faber*!); Kiangsi: Kiukiang (*Shearer*!); Fokien: Amoy (*Fortune*, 17! = A 17 *Hance*, 397! *de Grijs*!); Formosa (*Oldham*, 396, 398!); Kwangtung: St. John's Island (*Stewart*!), Pakhoi (*Playfair*!), Lantao Island (*Ford*!); Hainan (*Hance*! *A. Henry*!). Mus. Brit.; Herb. Kew.

Oldham's 396 from Formosa, which Mr. Maximowicz describes as a distinct species, is apparently an abnormal state of this species from a shaded situation.

3. **Clerodendron fœtidum,** *Bunge, Enum. Pl. Chin. Bor.* p. 52, nec *D. Don*; *Schauer in DC. Prodr.* xi. p. 672; *Maxim. in Mél. Biol.* xii. p. 518; *Bot. Mag.* t. 4880.

Clerodendron Bungei, *Steud. Nomencl. Bot.* ed. 2, i. p. 382; *Flore des Serres*, t. 863.

Chihli: Peking, cultivated (*Bunge*! *Bretschneider*!); Chekiang: Ningpo (*Faber*!); Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 189, 1393, 2307!). Mus. Brit.; Herb. Kew.

4. **Clerodendron? Fortunei,** *Hemsl.*, n. sp.

Frutex undique glaber, ramulis gracillimis lignosis, cortice albido. *Folia* longe graciliterque petiolata, valde membranacea,

oblonga, cum petiolo usque ad 6 poll. longa, apice abrupte acuminata, basi cuneata, margine integra, utrinque glabra, atro-viridia, venis primariis lateralibus utrinque 5–6 curvatis inconspicuis; petiolus gracilis, teres, usque 2 poll. longus. *Flores* paucissimi, laxissime paniculati, angustissimi, bipollicares, paniculis terminalibus semipedalibus trichotomis, ramulis pedicellisque elongatis fere capillaribus, bracteis minutis subulatis; calyx glaber, herbaceus, crassiusculus, anguste campanulatus, circiter 3 lineas longus, æqualiter 5-fidus, lobis lanceolatis acutis; corolla puberula, tubo fere filiformi bipollicari leviter curvato, limbi lobis oblongis 3–4 lineas longis; stamina glabra, distincte didynama, vix exserta; ovarium glabrum, obscure lobatum, imperfecte 2-loculare 2-ovulatum? *Fructus* ignotus.

China: without locality (*Fortune*, 20!). Herb. Kew.

Characterized by an exceedingly slender habit, few very narrow flowers, and scarcely exserted stamens. Until the ovary and fruit are better known the genus must remain doubtful.

5. **Clerodendron fragrans,** *Vent. Jard. Malm.* t. 70; *Schauer in DC. Prodr.* xi. p. 666; *Hook. et Arn. Bot. Beech. Voy.* pp. 205 et 268; *Maxim. in Mél. Biol.* xii. p. 518; *Bot. Mag.* t. 1834; *Bot. Reg.* 1838, t. 41.

Clerodendron Lindleyi, *Decne. in Flore des Serres,* ix. p. 17.

China: without locality (*Staunton*!); Formosa: Tamsui and Taiwan (*Oldham*, 394! *Playfair*!); Szechuen: above Chungking (*Faber*!); Kwangtung: Lofaushan and other localities (*Ford*, 134, 135!); Hainan: twenty miles west of Hoihow and near Kiunchow (*A. Henry*!); Luchu Archipelago (ex *Hooker & Arnott*). Mus. Brit.; Herb. Kew.

Commonly cultivated and naturalized in India and tropical America, mostly with double flowers. The specimens collected by Mr. Ford in Kwangtung and by Dr. A. Henry in Hainan are the only good ones we have seen with single flowers. They have a rather long slender corolla; but we have little doubt that they represent the wild condition of *C. fragrans*, Vent.

1 6. **Clerodendron fortunatum,** *Linn. Sp. Pl.* ed. 2, p. 889; *Schauer in DC. Prodr.* xi. p. 671; *Hook. et Arn. Bot. Beech. Voy.* p. 205; *Hance in Journ. Linn. Soc.* xiii. p. 117; *Osbeck's Travels*, Engl. ed. i. p. 369, t. 11; *Maxim. in Mél. Biol.* xii. p. 517.

Clerodendron castaneifolium, *Hook. et Arn. Bot. Beech. Voy.* p. 205; *Walp. Rep.* iv. p. 105.

Clerodendron lividum, *Lindl. in Bot. Reg.* t. 945; *Benth. Fl. Hongk.* p. 272; *Seem. Bot. Voy. 'Herald,'* p. 405; *Henriques in Bol. Soc. Brot.* iii. p. 144.

Clerodendron pentagonum, *Hance in Walp. Ann.* iii. p. 238.

CHINA: without locality (*Millett*! *Fortune*, 85!); HONGKONG (*Seemann*! *Champion*! *Urquhart*! *Tate*! *Wilford*! *Hance*!); KWANGTUNG: Whampoa (*Hance*, 203!). Mus. Brit.; Herb. Kew.

7. **Clerodendron Griffithianum,** *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 590.

YUNNAN: Poneshee (*Anderson*!). Herb. Kew.

Assam and Ava.

8. **Clerodendron inerme,** *Gærtn. Fruct.* i. p. 271, t. 57; *R. Br. in Ait. Hort. Kew.* ed. 2, iv. p. 65; *Schauer in DC. Prodr.* xi. p. 660; *Benth. Fl. Hongk.* p. 271; *Maxim. in Mél. Biol.* xii. p. 517; *Henriques in Bol. Soc. Brot.* iii. p. 144.

Volkameria inermis, *Lour. Fl. Cochinch.* p. 388.

FORMOSA (*Oldham*, 392, 397! *Maries*! *Playfair*!); KWANGTUNG: Macao (*Callery*!); HONGKONG (*Champion*! *Wright*! *Hinds*!); HAINAN (*Swinhoe*! *Hancock*! *A. Henry*!). Mus. Brit.; Herb. Kew.

India, Ceylon, Malaya, Polynesia and Australia.

Mr. C. B. Clarke (Hook. f. Fl. Brit. Ind. iv. p. 589) distinguishes *C. neriifolium*, Wall., from *C. inerme*, Gærtn., and refers the Chinese specimens to the former. We follow Bentham in treating them as varieties of one.

[*Clerodendron infortunatum*, Gærtn., is recorded by Loureiro and Hooker and Arnott from China; but we have seen no Chinese specimens of this species.]

9. **Clerodendron oxysepalum,** *Miq. in Journ. de Bot. Néerl.* i. (1861), p. 114.

SOUTH-EAST CHINA: abundant in the forests (*Krone* ex *Miquel*).

10. **Clerodendron paniculatum,** *Linn. Mant.* i. p. 90; *Schauer in DC. Prodr.* xi. p. 593; *Hook. et Arn. Bot. Beech. Voy.* p. 268;

Clarke in Hook. f. Fl. Brit. Ind. iv. p. 593; *Maxim. in Mél. Biol.* xii. p. 521; *Bot. Reg.* t. 406.

Clerodendron pyramidale, *Andr. Bot. Rep.* t. 628.

FORMOSA: various localities (*Wilford*! *Oldham*, 395! *Swinhoe*! *Ford*! *Hancock*! *Playfair*); HAINAN: near Hoihow (*A. Henry*!). Mus. Brit.; Herb. Kew.

Malaya, Siam, and Cochinchina.

[*Clerodendron pumilum*, Spreng., syn. *Volkameria pumila*, Lour. (Fl. Cochinch. p. 388), is an obscure plant recorded from Hongkong.]

11. **Clerodendron Siphonanthus**, *R. Br. in Ait. Hort. Kew.* ed. 2, iv. p. 65; *Schauer in DC. Prodr.* xi. p. 670; *Hook. et Arn. Bot. Beech. Voy.* p. 205; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 595; *Maxim. in Mél. Biol.* xii. p. 517; *Wight, Illustr. Ind. Bot.* t. 173.

Siphonanthus indica, *Linn. Sp. Pl.* ed. 1, p. 109; *Willd. Sp. Pl.* i. p. 606; *Lam. Illustr.* t. 79. fig. 1.

SOUTH CHINA (*Vachell* ex *Hooker & Arnott*).

India and Malaya, and commonly cultivated.

Vachell's specimen is not to be found in the Hookerian Herbarium at Kew.

12. **Clerodendron squamatum**, *Vahl, Symb.* ii. p. 74; *Schauer in DC. Prodr.* xi. p. 669; *Hance in Journ. Bot.* 1879, p. 13; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 593; *Bot. Reg.* t. 649; *Maxim. in Mél. Biol.* xii. p. 521.

Volkameria Kæmpferi, *Jacq. Ic. Pl. Rar.* iii. t. 500.

Volkameria japonica, *Thunb. Fl. Jap.* p. 255.

CHIHLI: Peking, cult. (*Bretschneider*!); SZECHUEN: Chungking (*Faber*!); KWANGSI: without locality (*Wenyon*!); HAINAN: Hoihow (*Hancock*!). Mus. Brit.; Herb. Kew.

Eastern India and Japan, and very commonly cultivated.

✓ 13. **Clerodendron trichotomum**, *Thunb. Fl. Jap.* p. 256; *Schauer in DC. Prodr.* xi. p. 668; *Debeaux, Fl. Shangh.* p. 48; *Maxim. in Mél. Biol.* xii. p. 519; *Bot. Mag.* t. 6561.

Clerodendron serotinum, *Carr. in Rev. Hort.* 1867, p. 351, cum ic xylogr.?

CHINA: without locality (*Fortune*, 35! *Home*!); KIANGSU: Shanghai (*Faber*! *Maingay*! *Bullock*!); CHEKIANG: Ningpo

(*Faber* !); FOKIEN: Amoy (*Fortune*, 45 !); FORMOSA: Tamsui (*Oldham*, 391 ! *A. Hance* !); HUPEH: Patung, Nanto, Tunghu, and other localities (*A. Henry* !); SZECHUEN: mount Omei and other localities (*Faber* ! *A. Henry* !); COREA: eastern side (*Perry* !); LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit.; Herb. Kew.

Japan.

[Walpers (in Nov. Act. Nat. Cur. xix., Suppl. i. p. 381) identifies a Chinese *Clerodendron* collected by Meyen with "*C. sericeum*, Wall."; but the original plant proves to be a Malpighiacea, *Hiptage sericea*, Hook. f.]

[*Holmskioldia sanguinea*, Willd., syn. *Hastingia coccinea*, Kœn., is stated by Roxburgh (Fl. Ind. iii. p. 65) to have been originally brought from China to Calcutta, though also a native of Bengal. This was probably an error, for so conspicuous a plant would scarcely have been overlooked by subsequent collectors, and we have seen no Chinese specimens. See also Bot. Reg. t. 692.]

1. **Caryopteris divaricata,** *Maxim. in Mél. Biol.* ix. p. 829, et xii. p. 522.

Clerodendron divaricatum, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 523; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 99; *Franch. et Savat. Enum. Pl. Jap.* i. p. 360.

KIANGSI: Kiukiang (hb. *Forbes* !); HUPEH: South Patung (*A. Henry* !); COREA: Soul mountains (*Gottsche* ex *Maximowicz*). Herb. Kew.

Japan.

2. **Caryopteris Mastacanthus,** *Schauer in DC. Prodr.* xi. p. 625; *Benth. Fl. Hongk.* p. 268; *Franch. et Savat. Enum. Pl. Jap.* i. p. 357; *Henriques in Bol. Soc. Brot.* iii. p. 144; *Hance in Journ. Linn. Soc.* xiii. p. 116; *Bot. Mag.* t. 6799.

Mastacanthus sinensis, *Endl. in Walp. Rep.* iv. p. 2; *Lindl. in Bot. Reg.* 1846, t. 2.

Barbula sinensis, *Lour. Fl. Cochinch.* p. 367.

Caryopteris incana, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 97; *Maxim. in Mél. Biol.* xii. p. 523.

Nepeta incana, *Thunb. Fl. Jap.* p. 244.

Nepeta japonica, *Willd. Sp. Pl.* iii. p. 52.

CHINA: without locality (*Millett* ! *Parkes* ! *Fortune*, 34, 136 !); FOKIEN: Foochow (*Maries* !); FORMOSA: Taiwan (*Playfair* !);

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*!); KWANGTUNG: Pakhoi (*Playfair*!); HONGKONG (*Champion*! *Tate*!). Mus. Brit.; Herb. Kew.

Japan.

3. **Caryopteris mongholica,** *Bunge, Pl. Mongh. Chin. Dec.* p. 28; *Schauer in DC. Prodr.* xi. p. 625; *Franchet, Pl. David.* p. 231; *Maxim. in Mél. Biol.* xii. p. 523.

NORTH CHINA (*Bunge*!); KANSUH: on the upper Hoangho (*Przewalski* ex *Maximowicz*). Herb. Kew.

Common in South-eastern Mongholia.

4. **Caryopteris nepetæfolia,** *Maxim. in Mél. Biol.* ix. p. 830, et xii. p. 524, et *in Bull. Soc. Nat. Mosc.* 1879, p. 40; *Franchet, Pl. David.* p. 231?

Teucrium nepetæfolium, *Benth. in DC. Prodr.* xii. p. 580; *Hemsl. in Journ. Bot.* 1876, p. 208; *S. Moore in Journ. Bot.* 1878, p. 138.

CHEKIANG: Ningpo (*Everard*!), Tahoo lake (*Forbes*!). Herb. Kew.

5. **Caryopteris? ningpoënsis,** *Hemsl.*, n. sp.

Herba perennis, erecta, præter inflorescentiam albo-tomentosam fere omnino glabra, caulibus simplicibus teretibus vel sursum subtetragonis saltem 2–3-pedalibus, internodiis quam folia brevioribus. *Folia* brevissime petiolata, papyracea, ovato-oblonga, ovalia vel fere elliptica, usque ad 6 poll. longa, longe acuminata, basi sæpius attenuata, calloso-serrulata, venis primariis lateralibus utrinque circiter 6–7 arcuatis subtus elevatis, venis ultimis minute reticulatis. *Flores* parvi (perfecte evoluti non visi), vix semipollicares, brevissime pedicellati, fasciculato-spicati, spicis angustis interruptis terminalibus 3–6 poll. longis suberectis bracteatis undique floribusque stellato-albo-tomentosis, bracteis herbaceis latis dentatis cito deciduis; calyx tubulosus, vel leviter inflatus, subæqualiter 5-dentatus, inconspicue 10-nervius, dentibus vix acutis; corolla e calyce breviter exserta, 5-lobata, tubo glabro angusto subite ampliato, limbi tomentosi lobis 4 superioribus æqualibus brevissimis rotundatis, lobo antico vel inferiore multo majore cucullato integro; stamina 4, breviter exserta; ovarium glabrum, stylo brevi. *Fructus* non visus.

CHEKIANG: mountains of Ningpo (*Faber*, 65!). Herb. Kew.

The genus of this distinct plant is uncertain. It has much the aspect of a *Buddleia*, and the inflorescence resembles more nearly that of *Vitex Agnus-castus*, L., than that of any previously described species of *Caryopteris*.

6. **Caryopteris ovata,** *Miq. in Journ. de Bot. Néerl.* i. (1861), p. 114.

SOUTH-EAST CHINA: in abundance on the mountains near Fukwing (*Krone* ex *Miquel*).

7. **Caryopteris tangutica,** *Maxim. in Mél. Biol.* ix. p. 301, et xii. p. 523.

KANSUH: high alpine region (*Przewalski* ex *Maximowicz*).

8. **Caryopteris terniflora,** *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 40, et *in Mél. Biol.* xii. p. 523.

KIANGSI: Kiukiang (*Faber*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 336, 336 A, 832, 855, 1230, 2038, 2726, 7776!), without locality (*David*!); SHENSI and KANSUH (*Piasezki* ex *Maximowicz*). Herb. Kew.

Very variable in the inflorescence, the cymes being from two- to many-flowered and distinctly peduncled or almost sessile. Perhaps this should be included under *C. nepetæfolia*, Maxim., to which Mr. Franchet refers specimens collected by Father David.

1. **Sphenodesma pentandra,** *Jack in Malayan Miscel.* i. p. 19, et *in Hook. Bot. Miscel.* i. p. 285; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 602; *Wight, Ic. Pl. Ind. Or.* t. 1475.

Sphenodesma acuminata, *Wight, op. cit.* t. 1476.
Roscoea pentandra, *Roxb. Fl. Ind.* iii. p. 54.
Symphorema Jackianum, *Kurz, For. Fl. Brit. Burma,* ii. p. 256.

HAINAN (*B. C. Henry*!). Herb. Kew.

Eastern India and Malaya.

2. **Sphenodesma unguiculata,** *Schauer in DC. Prodr.* xi. p. 623; *Hance in Journ. Bot.* 1883, p. 355; *Maxim. in Mél. Biol.* xii. p. 524.

Symphorema unguiculatum, *Kurz, For. Fl. Brit. Burma,* ii. p. 255.

HAINAN (*B. C. Henry*, hb. *Hance*!). Mus. Brit.

Eastern India and Malaya.

1. **Avicennia officinalis,** *Linn. Sp. Pl.* ed. 1, p. 110; *Schauer in DC. Prodr.* xi. p. 700; *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 604; *Walp. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 381;

Hance in Journ. Bot. 1878, p. 13; *Maxim. in Mél. Biol.* xii. p. 524.

Avicennia tomentosa, *Jacq.*; *Wall. Pl. As. Rar.* iii. p. 44, t. 271; *Wight, Ic. Pl. Ind. Or.* t. 1481.

FOKIEN: island of Kulangsu, Amoy (*Sampson*, hb. *Hance*!); FORMOSA: Takow (*Playfair*!); KWANGTUNG: Cape Syngmoon (*Meyen* ex *Walpers*); HONGKONG: salt-water swamps (*Ford*!). Mus. Brit.; Herb. Kew.

Maritime swamps almost throughout the tropics.

[*Dissolæna verticillata*, Lour. (Fl. Cochinch. p. 138), is said to be a *Verbenacea* (DC. Prodr. viii. p. 318), but we have seen no specimen, and it is not included in Schauer's Monograph of the Verbenaceæ in DeCandolle's 'Prodromus.' On the other hand, Henriques records it (Bol. Soc. Brot. iii. p. 144) from Kwangtung, collected by J. Gomez da Silva.]

105. LABIATÆ.

1. **Ocimum Basilicum,** *Linn. Sp. Pl.* ed. 1, p. 597; *Benth. in DC. Prodr.* xii. p. 32; *Hook. f. Fl. Brit. Ind.* iv. p. 608; *Bretschn. Early Res.* p. 166.

CHIHLI: Peking (*Bretschneider*!); KIANGSU: Shanghai (*Faber*!); KIANGSI: Kiukiang (*Shearer*!); KWANGTUNG (*Ford*!). Herb. Kew.

Cultivated throughout China, India, Malaya, and Polynesia; also in Africa and America. Believed to be indigenous in North-west India.

2. **Ocimum canum,** *Sims, Bot. Mag.* t. 2452 (stamineum in textu); *Benth. in DC. Prodr.* xii. p. 32; *Hook. f. Fl. Brit. Ind.* iv. p. 607.

YUNNAN (*Anderson*). Herb. Kew.

This species is also very widely cultivated and naturalized, and is probably indigenous in tropical Asia.

3. **Ocimum sanctum,** *Linn. Mant.* p. 85; *DC. Prodr.* xii. p. 38; *Hook. f. Fl. Brit. Ind.* iv. p. 609.

FORMOSA (*Playfair*!); HAINAN (*A. Henry*!). Herb. Kew.

Throughout the warmer parts of Asia, and extending to Australia and Polynesia. Commonly cultivated.

1. **Geniosporum holochilum,** *Hance in Journ. Bot.* 1879, p. 13.
Kwangtung: Pakhoi (*Bullock*, hb. *Hance* !). Mus. Brit.

1. **Mesona chinensis,** *Benth. Fl. Hongk.* p. 274.
Hongkong (*Wilford* !). Herb. Kew.

✓ 2. **Mesona prunelloides,** *Hemsl.*, n. sp.

Herba perennis, procumbens, forma parva *Prunellæ vulgaris* similis, undique pubescens, caulibus crassiusculis tetragonis. *Folia* breviter petiolata, crassiuscula, ovato-oblonga, maxima 12–15 lineas longa, obtusa vel rotundata, obscurissime crenulata, venis primariis utrinque sæpius 7 subtus sat conspicuis albo-pubescentibus, folia superiora juxta flores colorata. *Flores* parvi, cum staminibus exsertis 3–4 lineas longi, densissime spicati, bracteis quam flores brevioribus, spicis latis pollicaribus vel brevioribus; calyx tubulosus, extus longe albo-lanatus, intus glaber distincte bilabiatus, labiis ambobus integris rectis vel antico demum inflexis, labio postico multo (saltem duplo) longiore et intus distincte longitudinaliter 7-nervio; corollæ labium posticum latum, fere truncatum, brevissime 3-dentatum, dento intermedio emarginato; labium anticum naviculiforme extus, villosum; stamina 4, longe exserta, filamentis 2 posticorum plus minus hirsutis deorsum dilatatis et paulo supra basin calcari lato instructis. *Nuculæ* immaturæ tantum visæ, oblongæ, nudæ, glabræ.
Kwangtung: Pakhoi (*Playfair* !). Herb. Kew.

A very distinct species, differing from those previously described in the procumbent habit, congested flower-spikes, and in the calyx, which is two-lipped, both lips being entire and erect and the posterior one very much longer than the other.

✓ 1. **Orthosiphon debilis,** *Hemsl.*, n. sp.

Herba perennis, glabrescens, suberecta, caulibus gracilibus debilibus simplicibus tetragonis primum puberulis 6–15-pollicaribus. *Folia* longe interdum longissime graciliterque petiolata, membranacea, late cordata vel rotundato-cordata, interdum ovata vel inferiora reniformia, sæpius 1–2 poll. diametro, præter basin grosse crenata, simul interdum dentibus minoribus crenis alternantibus instructa, obtusa vel subacuta, utrinque pilis flaccidis albidis pluricellularibus appressis parce adspersa, venis inconspicuis; petiolus gracillimus, usque ad 2 poll. longus. *Flores* albi (*Henry*), absque staminibus exsertis vix pollicares (corollæ 2 imperfectæ adsunt), graciliter pedicellati; verticillastris 6–2-floris in racemos laxos terminales dispositis, bracteis 2 parvis ovato-oblongis subtendis; calyx fructifer siccus, decolor, glabrescens, fere scariosus, late tubulosus, 15-nervis, 3–4 lineas longus, deflectus, dente postico late rotundato leviter recurvo et breviter decurrente, 2 lateralibus cum 2 anticis aculeato-acuminatis, 2 anticis longioribus; corollæ tubus angustus, breviter exsertus; labium posticum subæqualiter 4-lobatum, lobis rotundatis, labium anticum longius; stamina 4, longe exserta, declinata, filamentis glabris, antherarum loculis parallelis? *Nuculæ* pallidæ, trigono-ellipsoideæ, glabræ, obscurissime rugulosæ.

HUPEH: Chienshih (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!). Herb. Kew.

Readily distinguished by its slender weak stems and long-stalked, heart-shaped, thin leaves.

√2. **Orthosiphon sinensis,** *Hemsl.*, n. sp.

Herba perennis, hispidula, ramosa, *O. rubricundi* affinis, ramulis gracilibus 4-angularibus, internodiis quam folia multo brevioribus. *Folia* distincte graciliterque petiolata, papyracea, late ovata, cum petiolo 1–2½ poll. longa, crenato-serrata, acutiuscula, basi rotundata vel abrupte cuneata, utrinque hispidula, venis primariis lateralibus utrinque sæpius 4–5, petiolo circiter semipollicari. *Flores* 8–9 lineas longi, sæpius geminati, laxe graciliterque racemosi, breviter pedicellati, bracteis minutis; calyx fructifer rigidus, coloratus, roseus, hispidulus, nervosus, labio postico late rotundato reflexo marginibus breviter decurrentibus, labio antico 4-dentato, dentibus aculeiformibus 2 inferioribus duplo longioribus; corollæ puberulæ tubo angusto parum curvato, fauce nuda subite ampliata, labio postico trilobulato, lobulis rotundatis lateralibus multo minoribus, intermedio emarginato, labio antico obovato-spatulato; stamina breviter exserta. *Nuculæ* compressæ, subtrigono-ellipsoideæ, ferrugineæ, glabræ.

KWANGTUNG: without exact locality (*Ford*, 146 partim!). Herb. Kew.

3. **Orthosiphon stamineus,** *Benth. in Wall. Pl. As. Rar.* ii. p. 15; *Monogr. Lab.* p. 29, et *in DC. Prodr.* xii. p. 52; *Hook. f. Fl. Brit. Ind.* iv. p. 615; *Bot. Mag.* t. 5833.

Ocimum grandiflorum, *Blume, Bijdr.* p. 835.

HAINAN: without locality (*A. Henry*!). Herb. Kew.

Eastern and Southern India, and Malaya to the Philippine Islands and North-east Australia.

1. **Acrocephalus capitatus,** *Benth. in Wall. Pl. As. Rar.* ii. p. 18, et *in DC. Prodr.* xii. p. 47; *Hook. f. Fl. Brit. Ind.* iv. p. 611; *Hook. Ic. Pl.* t. 456.

Ocimum capitellatum, *Linn. Suppl.* p. 276; *Willd. Sp. Pl.* iii. p. 167.

CHINA (ex *Willdenow*).

Widely spread in India and Malaya, but we have only the authority of Willdenow, dating from 1800, for its occurrence in China.

1. **Moschosma polystachyum,** *Benth. in Wall. Pl. As. Rar.* ii. p. 13, et *in DC. Prodr.* xii. p. 48; *Hook. f. Fl. Brit. Ind.* iv. p. 612; *Walp. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 373.

KWANGTUNG: Cape Syngmoon (*Meyen* ex *Walpers*). HAINAN: five miles south of Kiungchow (*A. Henry*!). Herb. Kew.

Tropical Asia, Africa, and Australia.

1. **Plectranthus amethystoides,** *Benth. Lab.* p. 45, et *in DC. Prodr.* xii. p. 61; *Maxim. in Mél. Biol.* ix. p. 424.

Plectranthus pekinensis, *Maxim. in Prim. Fl. Amur.* p. 213 in nota, *ex Maxim.*

CHIHLI: near Peking (*Tatarinow* ex *Maximowicz*); CHINA: without locality (*Parkes*!); KWANGTUNG: around Canton (*Sampson*! *Hance*, 10531!). Mus. Brit.; Herb. Kew.

✓ 2. **Plectranthus (§ Coleoides) cardiaphyllus,** *Hemsl.*, n. sp.

Herba perennis, hispidula, erecta, caulibus robustiusculis simplicibus tetragonis cavis 1–3-pedalibus, internodiis quam folia brevioribus. *Folia* longe petiolata, tenuia, fere membranacea, ovato-cordata, absque petiolo sæpius 1–2-pollicaria, regulariter crenato-serrata, obtuse acuminata, utrinque parce hispidula, subtus sæpius purpurea, laxe reticulato-venosa; petiolus gracilis, 1–2-pollicaris. *Flores* atro-rubri vel purpurei (fide *Henry*), staminibus exsertis exclusis circiter 4–5 lineas longi, angustissime verticillatim racemosi vel pseudo-spicati, brevissime pedicellati, racemis terminalibus, bracteis ovato-lanceolatis cito deciduis; calyx primum fere cylindricus, quam corolla vix dimidio brevior, hispidulus, 15-nervius, fructifer glaber, lobo postico lato rotundato reflexo, cæteris subulatis vel fere aristatis, 2 anticis longioribus; corollæ tubus angustus, æqualis, limbus parvus, extus pilis paucis crassis albis debilibus instructus, lobis 4 superioribus late rotundatis, lobo antico lato parum longiore; stamina stylusque longiuscule exserta, filamentis glabris. *Nuculæ* ovoideo-oblongæ, pallidæ, læves, glabræ.

HUPEH: Hsingshan and South Patung (*A. Henry*!). Herb. Kew.

Similar in aspect to *P. incanus*, Link (syn. *P. cordifolius*, D. Don), but easily distinguished by the close narrow inflorescence and the relatively very short lowermost lobe of the corolla.

✓ 3. **Plectranthus** (§ **Isodon**) **carnosifolius**, *Hemsl.*, n. sp.

Herba perennis, fere omnino glabra, multicaulis, caulibus, ut videtur, brevibus crassiusculis erectis vel adscendentibus. *Folia* carnosa (teste *Ford*), longe petiolata, cordato-rotundata vel fere orbicularia, 6–15 lineas diametro, paucicrenata, venis primariis lateralibus utrinque 3–4 arcuatis; petiolus sæpius plus minusve alatus, laminam æquans vel interdum superans. *Flores* albo-purpurei (teste *Ford*), 7–8 lineas longi, verticillatim racemosi, breviter graciliterque pedicellati, racemis terminalibus distincte pedunculatis obscure puberulis ebracteatis; calyx latus, per anthesin puberulus, subæqualiter 5-lobus, lobis subobtusis postico reflexo (fructifer non visus); corolla puberula, basi antice gibbosa, medio valde constricta, limbi lobis 4 superioribus brevibus rotundatis subæqualibus, lobo antico amplo concavo sinuato; stamina 4, inclusa, filamentis glabris. *Nuculæ* ignotæ.

KWANGTUNG: on the North river (*Ford*!). Herb. Kew.

4. **Plectranthus excisus**, *Maxim. Prim. Fl. Amur.* p. 213, et *in Mél. Biol.* ix. p. 423.

SHINGKING: without locality (*Ross*!); HUPEH: Fang and South Patung (*A. Henry*!); SZECHUEN: North Wushan (*A. Henry*!); COREA: Chemulpo (*Carles*!). Herb. Kew.

Mandshuria and Japan.

5. **Plectranthus Gerardianus**, *Benth. in Wall. Pl. As. Rar.* ii. p. 17, *Labiatæ*, p. 40, et *in DC. Prodr.* xii. p. 56, pro parte ex *Hook. f. Fl. Brit. Ind.* iv. p. 617 (varietates); *Hance in Journ. Bot.* 1883, p. 355.

Plectranthus graciliflorus, *Benth. in DC. Prodr.* xii. p. 56.

KWANGTUNG: along the Lienchau river (*B. C. Henry*, hb. *Hance*!). Mus. Brit.

This is not easily distinguished from *P. striatus*, Benth., and they may be forms of one species.

6. **Plectranthus glaucocalyx**, *Maxim. Prim. Fl. Amur.* pp. 212 et 475, et *in Mél. Biol.* ix. p. 426 (varietates); *Franchet, Pl. David.* p. 233, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 241.

Plectranthus Maximowiczii, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 101.

Plectranthus Buergeri, *Miq. loc. cit.*

Plectranthus Coetsa, *Benth. in DC. Prodr.* xii. p. 58, quoad plantam japonicam, teste *Maxim.*

Scutellaria japonica, *Burm. Fl. Ind.* p. 130.

CHIHLI: Peking (*Bretschneider*!); Peking western hills (*Hancock*!), Jehol (*David*, 2121!); SHINGKING: Peiling and other localities (*Webster*! *Ross*!); KIANGSU: Shanghai (*Maingay*!). Herb. Kew.

Mandshuria and Japan.

✓ 7. **Plectranthus** (§ **Isodon**) **Henryi**, *Hemsl.*, n. sp.

Herba perennis, erecta, 2–3-pedalis, ramosa, puberula, caulibus tetragonis glabrescentibus, ramulis ultimis gracilibus, internodiis quam folia brevioribus. *Folia* papyracea, rhomboideo-ovata vel lanceolata, acute acuminata, infra medium subite constricta et fere truncata, deorsum in pseudopetiolum alatum sæpius elongatum attenuata, cum petiolo usque ad 4 poll. longa sed sæpius minora, calloso-crenato-serrata, glabrescentia, venis primariis lateralibus utrinque sæpius 3–4 cum secundariis transversis rectis conspicuis conjunctis. *Flores* albi roseo tincti et lilacino-punctati (*Henry*), pauci ad apices ramulorum lateralium aggregati, breviter pedicellati, 3–4 lineas longi; calyx per anthesin minutus, puberulus, fere æqualiter 5-dentatus, fructifer auctus glaber, rigidus, nervosus, leviter curvatus; corollæ tubo brevissimo basi subæquali; corollæ labium posticum æqualiter breviterque 4-lobulatum, labio antico majore concavo; stamina breviter exserta, filamentis glabris. *Nuculæ* brunneæ, compresso-oblongæ vel compresso-rotundatæ, minutissime tuberculatæ.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 2727, 2763, 3086, 3094!). Herb. Kew.

8. **Plectranthus inflexus,** *Vahl* ex *Benth. Lab.* p. 711, et *in DC. Prodr.* xii. p. 61; *Maxim. in Mél. Biol.* ix. p. 425; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 100; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 214.

Plectranthus inconspicuus, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 101, teste *Maxim. in Mél. Biol.* ix. p. 657.

COREA: eastern side (*Perry*!); COREAN ARCHIPELAGO (*Oldham*, 610!). Herb. Kew.

Japan.

9. **Plectranthus marmoritis,** *Hance in Journ. Bot.* 1874, p. 53; *Maxim. in Mél. Biol.* ix. p. 430.

KWANGTUNG: on marble rocks of the "Seven Sisters" on the West river (*Sampson*!). Mus. Brit.; Herb. Kew.

√10. **Plectranthus** (§ **Isodon**) **nervosus,** *Hemsl.*, n. sp.

Herba perennis, facie *P. glaucocalycis,* a quo differt foliis crassioribus angustioribus prominenter nervosis, calycis dentibus longioribus nuculis pubescentibus.

KIANGSU: Shanghai (*Carles*!); HUPEH: Ichang, Patung and neighbourhood (*A. Henry,* 103, 992, 1055, 2260, 2725, 2821, 5105!); KWANGTUNG: North river (*Ford's native collector*!). Herb. Kew.

We have given this a name, yet we do not feel confident that the differences between it and *P. glaucocalyx*, Maxim., are constant, for there are some young specimens not easily dealt with.

√11. **Plectranthus** (§ **Isodon**) **nudipes,** *Hemsl.*, n. sp.

Herba perennis, undique fere glabra, rhizomate gracili repenti pluricauli, caulibus gracillimis simplicibus erectis cum inflorescentia 9–18-pollicaribus infra medium aphyllis nudis. *Folia* pauca, supra caulis medium plus minusve conferta, breviter petiolata vel suprema sessilia, tenuissima, lanceolata, 2–5 poll. longa (sursum sæpius gradatim longiora), argute serrata, acute longeque acuminata, basi cuneata, supra parcissime appresseque setulosa simul secus costam ac venas primarias obscure puberula, subtus pallida. *Flora* purpurei (teste *Henry*), vix semipollicares, breviter pedicellati, secus racemum terminalem gracilem minute puberulum sæpius subgeminatim dispositi, racemo usque ad 6 poll. longo sæpius simplici interdum trifurco; calyx per anthesin parvus, fere æqualiter 5-dentatus, fructifer valde auctus, declinatus, distincte bilabiatus, labio postico lato breviter tridendato, labio antico angusto longiore longe acuteque bidentato; corolla glabra, parum curvata, lobis 4 superioribus rotundatis subæqualibus, lobo antico longiore concavo integro; stamina inclusa, filamentis glabris. *Nuculæ* pallide brunneæ, oblongæ, parce puberulæ.

SZECHUEN: North Wushan (*A. Henry*!). Herb. Kew.

Characterized by slender stems, naked below the middle, and very thin leaves crowded at the base of the inflorescence.

✓12. **Plectranthus** (§ **Isodon**) **racemosus,** *Hemsl.*, n. sp.

Herba perennis, glabrescens, erecta, 2–3-pedalis, interdum 4-pedalis, caulibus simplicibus vel plus minus ramosis robustiusculis tetragonis, internodiis quam folia brevioribus. *Folia* petiolata, papyracea vel fere membranacea, rhomboideo-ovata, utrinque longissime attenuata, acuminata, 3–6 poll. longa, sursum grosse dentata vel serrato-dentata, glabra vel glabrescentia, venis primariis lateralibus utrinque circiter 3 cum secundariis transversis connectis, venis ultimis inconspicuis dense reticulatis. *Flores* albi vel rosei (teste *Henry*), vix semipollicares, racemosi vel pseudo-racemosi (*i. e.* pedunculis interdum trifloris), breviter graciliterque pedicellati, racemis axillaribus terminalibusque gracilibus 3–6 poll. longis puberulis; calyx primum puberulus, distincte bilabiatus, labio superiore tridentatus inferiore bidentatus, fructifer rigidus, nervosus, curvatus; corolla glabra, tubo latissimo postice gibboso, labiis subæquilongis, antico naviculiformi; stamina 4, breviter exserta, filamentis glabris. *Nuculæ* stramineæ, glabræ, nudæ, compresso-rotundatæ.

HUPEH: Ichang, Patung and immediate neighbourhood (*A. Henry*, 417, 418, 2463, 4855!); SZECHUEN: South Wushan (*A. Henry*!). Herb. Kew.

Characterized by large, coarsely toothed leaves gradually tapering at both ends, and racemose or subracemose flowers with a relatively very broad tube gibbous on the upper side.

✓13. **Plectranthus** (§ **Isodon**) **rubescens,** *Hemsl.*, n. sp.

Herba perennis, erecta, glabra, multicaulis, caulibus 4-gonis vel fere 4-angularibus gracilibus sæpius simplicibus 12–18 poll. altis atque foliorum venis calycibusque rubris vel rubescentibus. *Folia* longe petiolata, tenuia sed vix membranacea, ovata vel rhomboideo-ovata, cum petiolo 1–2½ poll. longa, acute acuminata (*i. e.* dente terminali sæpius longiore), infra medium abrupte constricta et seorsum gradatim attenuata (petiolum alatum simulans), grosse crenato-serrata, utrinque glabra, subtus pallidiora, venis primariis lateralibus utrinque 3–4 sat conspicuis. *Flores* vix semipollicares, pauci in cymas compactas axillares et racemoso-terminales dispositi; cymæ quam folia breviores, pedunculis pedicellisque capillaribus; calyx fructifer glaber, rigidus, nervosus, coloratus, leviter curvatus, vix 3 lineas longus, subæqualiter 5-dentatus, dentibus brevibus deltoideis subobtusis; corolla parce puberula, tubo brevi, labio inferiore longiore naviculiformi; stamina 4, breviter exserta, filamentis glabris. *Nuculæ* pallidæ, compresso-oblongæ, nudæ, glabræ.

HUPEH: Ichang (*A. Henry*, 974!). Herb. Kew.

Similar to *P. amethystoides*, Benth., but differing in being almost wholly glabrous, in the redness of the whole plant, and in the glabrous nutlets.

14. **Plectranthus sinensis**, *Miq. in Journ. de Bot. Néerl.* i. p. 115.

KWANGTUNG: Faythong (*Krone* ex *Miquel*).

It is stated that this differs from *P. amethystoides*, Benth., by the presence of glands, and has flowers less than two lines in length.

15. **Plectranthus striatus**, *Benth. in Wall. Pl. As. Rar.* ii. p. 17, et *in DC. Prodr.* xii. p. 56; *Hook. f. Fl. Brit. Ind.* iv. p. 618?

HUPEH: Changyang, Ichang and immediate neighbourhood (*A. Henry*, 2926, 7689!); KWANGTUNG: Lofaushan at 3000 ft. (*Ford*!). Herb. Kew.

Northern and Eastern India.

We are in doubt whether these specimens should be referred here or to *P. Gerardianus*, Benth., if indeed there are two species under these names.

16. **Plectranthus** (§ **Isodon**) **Tatei**, *Hemsl.*, n. sp.

Herba perennis? ramosa, fere omnino glabra, ramis tetragonis. *Folia* longe petiolata, papyracea vel fere membranacea, lanceolato-oblonga, cum petiolo usque ad 6. poll longa sed ramulorum floralium sæpius multo minora, utrinque attenuata, supra medium crenato-serrata, supra secus venas obscurissime puberula cæterum subnitida, subtus glabra, densissime glanduloso-punctata. *Flores* minuti (staminibus longiuscule exsertis exclusis circiter 2½ lineas longi), cymoso-paniculati, paniculis terminalibus oblongis semipedalibus, bracteis parvis obovatis ad basin ramulorum primarium instructis, ramulis pedicellisque capillaribus; calyx fructifer obliquus, circiter 1½ lin. longus, conspicue glandulosus simul pulverulentus, dentibus latis obtusis; corolla glabra, tubo recto lato, limbo parvo; stamina stylusque longe exserta, filamentis glabris. *Nuculæ* minutæ, compresso-rotundatæ vel ellipsoideæ, glabræ.

KWANGTUNG: Wongyu, in waste ground (*G. R. Tate*!). Herb. Kew.

17. **Plectranthus ternifolius,** *D. Don, Prodr. Fl. Nep.* p. 117; *Benth. in DC. Prodr.* xii. p. 61; *Hook. f. Fl. Brit. Ind.* iv. p. 621; *Maxim. in Mél. Biol.* ix. p. 424; *Hance in Journ. Bot.* 1874, p. 53.

KWANGTUNG: without locality (*Hance*!). Mus. Brit.

Widely spread in India.

18. **Plectranthus (§ Isodon) Websteri,** *Hemsl.*, n. sp.

Herba perennis, erecta, fere undique glabra vel glabrescens, caulibus graciliusculis tetragonis simplicibus vel pauciramosis, 1½–2-pedalibus, internodiis quam folia brevioribus. *Folia* longiuscule graciliterque petiolata, membranacea, oblongo-lanceolata, cum petiolo usque ad 5 poll. longa, sæpius acute acuminata (interdum dente terminali insigniter elongato), basi longe attenuata, crenato-serrata, utrinque cito glabrescentia, venis primariis lateralibus utrinque circiter 4–5 pallidis prope marginem inter se anastomosantibus et cum secundariis transversis connectis, venis ultimis minutissime reticulatis. *Flores* 3–4 lineas longi, puberuli vel pubescentes, pauci, cymoso-paniculati, paniculis terminalibus 2–3 poll. longis; calyx fructifer circiter sesquilineam longus, campanulatus, glabrescens, rigidus, cæruleus, subæqualiter 5-dentatus, dentibus brevibus vix acutis; corolla pilosula, lata, tubo brevissimo basi fere æquali, labiis latis fere æquilongis; stamina 4, brevissime exserta. *Nuculæ* compresso-ellipsoideæ, brunneæ, nudæ, glabræ.

SHINGKING: Peiling, near Moukden (*Webster*!) Herb. Kew.

[*Hyptis capitata,* Jacq. (Ic. Pl. Rar. i. t. 114), and *Hyptis suaveolens,* Poit. (Ann. Mus. Par. vii. t. 29. f. 2), both natives of

tropical America, and now widely spread in warm regions of the Old World, have been collected within our limits; both in Formosa, and the latter in several localities in South China as well.]

1. **Pogostemon parviflorus,** *Benth. in Wall. Pl. As. Rar.* i. p. 31; *DC. Prodr.* xii. p. 152, et *Fl. Hongk.* p. 275; *Hook. f. Fl. Brit. Ind.* iv. p. 6.

HONGKONG: mount Parker (*Champion*!). Herb. Kew.

Generally spread in subtropical India and Burma, though not recorded from Ceylon.

1. **Dysophylla auricularia,** *Blume, Bijdr.* p. 826; *Benth. in DC. Prodr.* xii. p. 156, et *Fl. Hongk.* p. 275; *Henriques in Bol. Soc. Brot.* iii. p. 144; *Hook. f. Fl. Brit. Ind.* iv. p. 638; *Wight, Ic. Pl. Ind. Or.* t. 1445.

FORMOSA: west coast (*Wilford*!); KWANGTUNG: Pakhoi (*Playfair*!), Lofaushan (*Ford*!), Macao (*Silva* ex *Henriques*); HONGKONG (*Champion*!); HAINAN: various localities (*A. Henry*!). Mus. Brit.; Herb. Kew.

North and South India, Ceylon, and Malaya to the Philippine Islands.

2. **Dysophylla cruciata,** *Benth. in Wall. Pl. As. Rar.* i. p. 30; *DC. Prodr.* xii. p. 157; *Hook. f. Fl. Brit. Ind.* iv. p. 639.

Dysophylla tetraphylla, *Wight, Ic. Pl. Ind. Or.* t. 1444; *Hance in Journ. Bot.* 1878, p. 231, et 1883, p. 355.

HAINAN: near Hoihow (*Bullock*! *A. Henry*!). Mus. Brit.; Herb. Kew.

North and South India eastward to the Khasia mountains.

The Hainan specimens are less hairy and the flowers apparently smaller; and possibly they may prove specifically different.

3. **Dysophylla Sampsoni,** *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 234.

KWANGTUNG: in damp places around Canton (*Sampson*, hb. *Hance*, 10946!). Mus. Brit.; Herb. Kew.

Perhaps a starved condition of *D. verticillata*, Benth.

4. **Dysophylla verticillata,** *Benth. in Wall. Pl. As. Rar.* i.

p. 30, et *in DC. Prodr.* xii. p. 137; *Hook. f. Fl. Brit. Ind.* iv. p. 639; *Franchet, Pl. David.* p. 235.

Mentha stellata, *Lour. Fl. Cochinch.* p. 361.

Dysophylla Benthamiana, *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 234.

Dysophylla japonica, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 102?

Kiangsi: Kiukiang (*David* ex *Franchet*); Kwangtung: around Canton and on the road to the White Cloud Hill (*Sampson*, hb. *Hance*, 11448!). Mus. Brit.; Herb. Kew.

Eastern and Southern India, Ceylon, and Malaya to Japan, the Philippine Islands and Australia.

1. **Elsholtzia cristata,** *Willd. Sp. Pl.* iii. p. 29; *Benth. in DC. Prodr.* xii. p. 163; *Hook. f. Fl. Brit. Ind.* iv. p. 645; *Franchet, Pl. David.* p. 234, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 242; *Bot. Mag.* t. 2560.

Chihli and Corea to Hupeh and Kiangsi, apparently common (*Fortune*! *Bretschneider*! *Watters*! *A. Henry*! and others). Mus. Brit.; Herb. Kew.

North India and Siberia to Mandshuria and Japan. Naturalized in Scandinavia, Germany, and elsewhere.

2. **Elsholtzia incisa,** *Benth. Lab.* p. 162, et *in DC. Prodr.* xii. p. 161; *Hook. f. Fl. Brit. Ind.* iv. p. 644, var.?

Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 2889, 3272!). Herb. Kew.

Northern and Eastern India, and Burma.

The flower-spikes of the specimens provisionally placed here are denser than the typical Indian, but not more so than *E. incisa*, var.? *major*, Hook. f. *loc. cit.*; yet that also may prove a distinct species, for the nutlets are very different.

3. **Elsholtzia integrifolia,** *Benth. Lab.* p. 714, et *in DC. Prodr.* xii. p. 161.

China: without locality (*Staunton*!). Mus. Brit.

4. **Elsholtzia Oldhami,** *Hemsl.*, n. sp.

Herba minute arachnoideo-pubescens, caulibus tetragonis crassiusculis multiascendente ramosis. *Folia* longiuscule petiolata, papyracea vel submembranacea, ovato-lanceolata, absque petiolo 1–2½ poll. longa, acuminata, vix acuta, basi rotundata vel subcuneata, grossiuscule serrato-dentata, supra vix hispidula, subtus parce minuteque arachnoideo-pubescentia, venis primariis lateralibus utrinque circiter 5 supra sat conspicuis; petiolus gracilis, 6–9 lineas longus. *Flores* parvi vel minuti (alabastra tantum visa), quadrifariam spicati; spicæ axillares, solitarii, vel terminales, subsessiles, pollicares vel breviores, densissimæ, bracteis pubescentibus late spathulato-rotundatis subite acuminatis flores subtendis (et fere tectis ?) instructæ; calyx pubescens, subæqualiter alte 5-dentatus, intus glaber; corolla 4-fida, labio vel lobo postico emarginato; stamina 4, glabra, antheris distincte bilocularibus; ovarium glabrum.

FORMOSA: without locality (*Oldham*, 360/2!). Herb. Kew.

Densely quadrifariously spicate flowers with large bracts characterize this species.

5. **Elsholtzia polystachya,** *Benth. Lab.* p. 161, et *in DC. Prodr.* xii. p. 160; *Hook. f. Fl. Brit. Ind.* iv. p. 643.

Aphanochilus polystachyus, *Benth. in Wall. Pl. As. Rar.* i. p. 27, t. 33.

Colebrookia oppositifolia, *Loddiges, Bot. Cab.* t. 487, nec *Smith.*

HUPEH: Fang (*A. Henry*!) Herb. Kew

North India, from Kashmir to Khasia.

This should perhaps include *E. Stauntoni*, Benth., as the distinctions pointed out in the 'Prodromus' do not hold good, except perhaps the degree of hairiness; and the Indian specimens of *E. polystachya*, Benth., represent both red- and white-flowered varieties.

✓ 6. **Elsholtzia rugulosa,** *Hemsl.*, n. sp.

Species facie *E. blandæ*, foliis minoribus crassioribus crebre obtusiusculeque serrulatis, supra hispidulis simul rugulosis, subtus albido-tomentosis, venis primariis lateralibus utrinque circiter 6 subtus elevatis, calyce dense albo-hispidulo, nuculis oblongis parum compressis.

SOUTH-WEST CHINA (*Bourne*!). Herb. Kew.

7. **Elsholtzia Stauntoni,** *Benth. Lab.* p. 161, et *in DC. Prodr.* xii. p. 160; *Hance in Journ. Linn. Soc.* xiii. p. 85; *Franchet, Pl. David.* p. 233 (forma puberula).

CHIHLI: near Peking (*Bretschneider*!), Jehol (*David* ex *Franchet*), Nankau (*Williams*!), without locality (*Staunton*). Mus. Brit.; Herb. Kew.

See remarks under *E. polystachya*, Benth.

1. **Keiskea japonica,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 105; *Franch. et Savat. Enum. Pl. Jap.* i. p. 365.

KIANGSU (*Poli* ex *Franchet* in litt.).

Japan.

1. **Perilla nankinensis,** *Decne. in Rev. Hort.* 1852, p. 61, cum icone colorata.

Perilla ocymoides, β. crispa, *Benth. in DC. Prodr.* xii. p. 164.

Perilla arguta, *Benth. loc. cit.*, et *Fl. Hongk.* p. 276; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 104; *Franch. et Savat. Enum. Pl. Jap.* i. p. 65; *Henriques in Bol. Soc. Brot.* iii. p. 144.

Dentidia nankinensis, *Lour. Fl. Cochinch.* p. 369.

Plectranthus nankinensis, *Spreng. Syst. Veg.* ii. p. 691.

Mentha reticulosa, *Hance in Walp. Ann.* iii. p. 247.

KIANGSI: Shanghai (*Maingay*! *Carles*!); SZECHUEN: Hokiang (*Faber*!); KWANGTUNG (*Silva* ex *Henriques*); HONGKONG (*Hance*!). Mus. Brit.; Herb. Kew.

Japan.

From the authenticated named specimens before us, we do not hesitate to join *Perilla arguta*, Benth., to the old *Dentidia nankinensis*, Lour., and we suspect that it is only a cultivated condition of *Perilla ocymoides*, Linn.

2. **Perilla ocymoides,** *Linn. Gen. Pl.* ed. 6, p. 578; *Benth. in DC. Prodr.* xii. p. 163; *Hance in Journ. Bot.* 1870, p. 276, et 1879, p. 14; *Franchet, Pl. David.* p. 234; *Hook. f. Fl. Brit. Ind.* iv. p. 646; *Bot. Mag.* t. 2395.

CHIHLI: Peking (*Bretschneider*!), Panshan (*Bullock*!); KIANGSU: Shanghai (*Faber*!); CHEKIANG: Chapu (*Oldham*!); KIANGSI: Kiukiang (*David* ex *Franchet*); FORMOSA (*Oldham*, 357, 360½!); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*!); KWANGTUNG: Macao and other localities (*Callery*! *Hance*! *Sampson*!). Mus. Brit.; Herb. Kew.

North India, Burma, and Japan. Commonly cultivated in China for the oil obtained from its seeds.

The plant named *Melissa cretica* by Loureiro (Fl. Cochinch. p. 368), and said to be cultivated in China, was probably *Perilla ocymoides*, Linn.; for, according to Bretschneider (Early Res. p. 167), the Chinese name cited by Loureiro is applied to the latter.

1. **Mosla* chinensis,** *Maxim. in Mél. Biol.* xi. p. 805.

FOKIEN: hill-sides near Foochow at 800 feet above the sea (*Augustinowicz* ex *Maximowicz*).

According to numbers cited by Mr. de Maximowicz in a letter to Professor Oliver, there are several specimens of this species at Kew; but they do not quite agree with the description, and differ mainly from *M. dianthera,* Maxim., in the acute upper teeth of the calyx.

2. **Mosla dianthera,** *Maxim. in Mél. Biol.* ix. p. 431; *Hook. f. Fl. Brit. Ind.* iv. p. 647, hic sensu latiore.

Hedeoma nepalensis, *Benth. Lab.* p. 366, et *in DC. Prodr.* xii. p. 244; *Decne. in Voy. Jacquem., Bot.* t. 138.

CHINA: without locality (*Home!*); KIANGSU: Shanghai (*Maingay!*); HUPEH: Patung district (*A. Henry,* 2742, 2489!); KWANGTUNG: Lofaushan (*Ford!*). Herb. Kew.

Kashmir eastward to Chittagong, Khasia, and Burma.

3. **Mosla Fordii,** *Maxim. in Mél. Biol.* xii. p. 525.

HUPEH: Ichang and immediate neighbourhood (*A. Henry,* 2240!); KWANGTUNG: Lofaushan at 3100 feet and other localities (*Faber,* 62! *Ford,* 141, 142!). Herb. Kew.

This is a very distinct species, and is a connecting link with *Elsholtzia.* In luxuriant much-branched specimens eighteen inches high we find the lower anthers of the lower stamens, though much smaller, distinctly two-celled and apparently polliniferous; but on this point we are not sure.

4. **Mosla formosana,** *Maxim. in Mél. Biol.* ix. p. 434.

FORMOSA: Tamsui (*Oldham,* 362!). Mus. Brit.; Herb. Kew.

There is a singularly abnormal specimen of this in the Kew Herbarium with solitary axillary flowers; and there is a specimen from North-western India, collected by Falconer, which we cannot distinguish from typical *M. formosana,* Maxim.

5. **Mosla grosseserrata,** *Maxim. in Mél. Biol.* ix. p. 432; *Franch. et Savat. Enum. Pl. Jap.* i. p. 370.

KIANGSU (*Poli* ex *Franchet* in litt.).

Also in Japan.

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* The species of this genus proposed by Maximowicz are most of them very closely allied; and we have not been able to sort the numerous specimens satisfactorily.

6. **Mosla lanceolata**, *Maxim. in Mél. Biol.* ix. p. 434, et *in Bull. Soc. Nat. Mosc.* 1879, p. 41.

Perilla lanceolata, *Benth. in DC. Prodr.* xii. p. 164, et *Fl. Hongk.* p. 276.

Hedeoma nepalensis, *Seem. Bot. Voy. 'Herald,'* p. 404, non *Benth.* ex *Benth.*

KIANGSU: Shanghai (*Carles*!); CHEKIANG: Ningpo (*Faber*!); FOKIEN: Amoy (*Hance*, 1484!); KWANGTUNG: Whampoa (*Hance*!); HONGKONG (*Wright*! *Hance*!). Mus. Brit.; Herb. Kew.

7. **Mosla punctata**, *Maxim. in Mél. Biol.* ix. p. 436; *Franch. et Savat. Enum. Pl. Jap.* i. p. 370.

Ocymum punctatum, *Thunb. Fl. Jap.* p. 249.

Ocymum scabrum, *Thunb. in Trans. Linn. Soc.* ii. p. 338.

CHEKIANG: Ningpo (*Faber*!); KIANGSI; Kiukiang (*Shearer*!); HUPEH: Patung district (*A. Henry*, 4812, 4813, 4895, 4896, 5013, 5017!). Herb. Kew.

Japan.

We are not confident that all the specimens referred here accurately represent Maximowicz's idea of the species.

1. **Mentha arvensis**, *Linn. Sp. Pl.* ed. 1, p. 577; *Benth. in DC. Prodr.* xii. p. 171; *Benth. Fl. Hongk.* p. 276; *Franch. et Savat. Enum. Pl. Jap.* i. p. 365; *Franchet, Pl. David.* p. 235, et in *Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 242; *Debeaux, Fl. Tchef.* p. 107 (forma chinensis); *Hook. f. Fl. Brit. Ind.* iv. p. 648.

CHIHLI and SHINGKING to HUPEH and HONGKONG (*Bretschneider*! *Maingay*! *Hance*! *A. Henry*! and others). Mus. Brit.; Herb. Kew.

Western Europe to Japan and Java. Very closely allied to *M. canadensis*, Linn., and united with it by some authors.

[Loureiro (Fl. Cochinch. p. 360–1) records *Mentha crispa*, Linn., a variety of *M. aquatica*, Linn., as *ubique obvia* in China, and *M. Pulegium*, Linn., as wild and cultivated. The latter was probably *M. arvensis*, Linn., which bears the Chinese name given by Loureiro. See Bretschneider (Early Res. p. 167). We have also a note of the equally widely spread *Mentha sylvestris*, Linn., having been collected by Shearer at Kiukiang; but we do not find the specimen.]

1. **Lycopus europæus,** *Linn. Sp. Pl.* ed. 1, p. 21; *Benth. in DC. Prodr.* xii. p. 178; *Franch. et Savat. Enum. Pl. Jap.* i. p. 366; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 42; *Franchet, in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 242; *Hook. f. Fl. Brit. Ind.* iv. p. 648.

CHIHLI: near Peking (*Bretschneider*!); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); KIANGSU: Tatsiang (*Poli* ex *Franchet* in litt.). Mus. Brit.; Herb. Kew.

Western Europe to Mandshuria and Japan.

2. **Lycopus lucidus,** *Turcz.* ex *Benth. in DC. Prodr.* xii. p. 178; *Franchet, Pl. David.* p. 235; *Franch. et Savat. Enum. Pl. Jap.* i. p. 367; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* pp. 217, 475; *Ledeb. Fl. Ross.* iii. p. 341.

CHIHLI: near Peking (*Bretschneider*!); SHINGKING (*Ross*!); KIANGSU: Shanghai (*Faber*!); HUPEH: Patung district and Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: Suifu (*Faber*!). Herb. Kew.

Siberia, Mandshuria, and Japan.

1. **Origanum vulgare,** *Linn. Sp. Pl.* ed. 1, p. 590; *Benth. in DC. Prodr.* xii. p. 193 (varietates); *Hance in Journ. Bot.* 1880, p. 300; *Franchet, Pl. David.* p. 235; *Hook. f. Fl. Brit. Ind.* iv. p. 648.

Origanum normale, *D. Don, Prodr. Fl. Nep.* p. 113.

Origanum heracleoticum et O. creticum, *Lour. Fl. Cochinch.* p. 373.

KIANGSI: Kiukiang and other localities (*Shearer*! *David*!); HUPEH: Ichang, Nanto and mountains to the northward (*Bullock*! *A. Henry*!); KWANGTUNG (ex *Loureiro*). Mus. Brit.; Herb. Kew.

Western Europe and North Africa to Mandshuria.

[Loureiro, *loc. cit.*, mentions both *O. Marjorana*, Linn., and *O. Dictamnus*, Linn., as being found in waste places near Canton.]

1. **Thymus Serpyllum,** *Linn. Sp. Pl.* ed. 1, p. 590; *Benth. in DC. Prodr.* xii. p. 201 (varietates); *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Franch. et Savat. Enum. Pl. Jap.* i. p. 367; *Debeaux, Fl. Tchef.* p. 108; *Franchet, Pl. David.* p. 235, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 242.

CHIHLI: Jehol and Pohuashan (*David* ex *Franchet*); SHINGKING: Talienhwan (*Birnie*!); SHANTUNG: without locality (*Maingay*!), Chefoo mountains, common (*Faber*!). Herb. Kew.

Western Europe and North Africa to Abyssinia, North India, Mandshuria, and Japan.

1. **Calamintha chinensis,** *Benth. in DC. Prodr.* xii. p. 233; *Franch. et Savat. Enum. Pl. Jap.* i. p. 369; *Debeaux, Fl. Tchef.* p. 109; *Hance in Ann. Sc. Nat.* 5me série, v. p. 235; *Franchet, Pl. David.* p. 236, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 242.

Calamintha Clinopodium, var. chinensis, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 107.

Calamintha Clinopodium, var. urticifolia, *Hance in Ann. Sc. Nat.* 5me série, v. p. 236.

CHIHLI, SHINGKING, and COREA to HUPEH, KWANGTUNG, LUCHU ARCHIPELAGO, and FORMOSA (*Fortune*! *Wilford*! *Ross*! *Webster*; *Oldham*! and numerous other collectors). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

An exceedingly variable species as limited here, especially in the inflorescence and calyx. Perhaps separable into several distinguishable forms, yet so closely connected with *C. Clinopodium*, Benth., as to have been united with it by Miquel. There are some specimens, too, that might be referred either to *C. Clinopodium*, Benth., or to *C. umbrosa*, Benth.

2. **Calamintha confinis,** *Hance in Journ. Bot.* 1868, p. 331.

KWANGTUNG: Sichushan (*Sampson*, hb. *Hance*, 13045!). Mus. Brit.; Herb. Kew.

3. **Calamintha gracilis,** *Benth. in DC. Prodr.* xii. p. 232; *Hance in Ann. Sc. Nat.* 5me série, v. p. 236 (var. densiflora); *Franch. et Savat. Enum. Pl. Jap.* i. p. 369.

SHANTUNG: Chefoo (*Faber*!); KIANGSU: Shanghai (*Carles*!); CHEKIANG: Ningpo (*Oldham*, 65!); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*!); KWANGTUNG: Pakwan (*Sampson*, 7489!), without locality (*Ford*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

Dr. Henry's 4916 from the Patung district is intermediate in character between this and *C. umbrosa*, Benth.

4. **Calamintha umbrosa,** *Benth. in DC. Prodr.* xii. p. 232; *Franchet, Pl. David.* p. 236; *Hook. f. Fl. Brit. Ind.* iv. p. 650; *Franch. et Savat. Enum. Pl. Jap.* i. p. 368 (var. japonica).

Calamintha repens, *Benth. in DC. Prodr.* xii. p. 233.

Melissa umbrosa, *Bieber. Fl. Taur.-Cauc.* ii. p. 63; *Benth. Lab.* p. 392; *Wight, Ic. Pl. Ind. Or.* t. 1447.

Kiangsu: Shanghai (*Carles*!); Fokien: Amoy (*Hance*, 1483!); Formosa: Tamsui (*Oldham*, 363!); Hupeh: Ichang, Patung and vicinity (*A. Henry*, 2778!); Yunnan (*Anderson*!). Mus. Brit.; Herb. Kew.

Caucasus to Afghanistan, North and South India, Ceylon, Java, and Japan.

5. **Calamintha,** sp. n.?; facie *Marrubii vulgaris*, specimen imperfectum tantum adest.

Hupeh: Ichang (*A. Henry*, 316!). Herb. Kew.

1. **Salvia hians,** *Royle in Hook. Bot. Misc.* iii. p. 373; *Illustr. Himal. Pl.* p. 303, t. 75. f. 2; *DC. Prodr.* xii. p. 276; *Hook. f. Fl. Brit. Ind.* iv. p. 653; *Bot. Reg.* 1841, t. 39; *Bot. Mag.* t. 6517.

Chekiang: Ningpo mountains (*Faber*!); Szechuen: Mount Omei at 6000 feet (*Faber*!). Herb. Kew.

Western temperate Himalaya.

2. **Salvia japonica,** *Thunb. Fl. Jap.* p. 22; *Franch. et Savat. Enum. Pl. Jap.* i. p. 371 (varietates α. integrifolia, β. ternata, et γ. bipinnata); *Franchet, Pl. David.* p. 237 (var. lanuginosa).

Salvia Fortunei, *Benth. in DC. Prodr.* xii. p. 354, et *Fl. Hongk.* p. 277; *Hance in Journ. Linn. Soc.* xiii. p. 117, et *in Journ. Bot.* 1874, p. 261.

Salvia chinensis, *Benth. in DC. Prodr.* xii. p. 355; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 243.

Kiangsu to Szechuen, Hupeh, Kwangtung, and Hongkong: apparently common and very variable (*Staunton*! *Fortune*! *Hance*! *A. Henry*! and many other collectors). Mus. Brit.; Herb. Kew.

Japan.

✓ Var. **erythrophylla,** *Hemsl.*

Herba biennis vel perennis, erecta, 1½–2 ped. alta, parce pilosula, hispidula, caulibus gracilibus subsimplicibus tetragonis,

internodiis elongatis folia æquantibus vel interdum longioribus. *Folia* radicalia atquè caulina vel simplicia vel 3–5-pinnatifoliolata, longe petiolata, tenuia, fere membranacea, parce hispidula vel pilosula, radicalia cum petiolo usque ad 9 poll. longa et maxima caulina saltem 6-pollicaria; foliola valde inæqualia, terminali multo majore, omnia sæpius distincte petiolulata, cordato-oblonga, ovata, lanceolata vel interdum lateralia fere orbicularia, crenata vel inciso-crenata, interdum simul irregulariter paucilobulata, cito glabrescentia, subtus venis exceptis atro-rubra vel purpurea. *Flores* rubri (teste *Henry*), parvi (absque staminibus longe exsertis vix 4–5 lineas longi), pauci in racemos angustos laxos terminales dispositi, breviter pedicellati, bracteis parvis lanceolatis; calyx hispidulus, inæqualiter bilabiatus, dorso longitudinaliter anguste bialatus (labio superiore marginibus decurrentibus), labio superiore breviore fere horizontali, labio inferiore aculeato-bidentato; corolla puberula, intus annulata, tubo lato omnino incluso, limbo parvo, labio superiore breviore concavo, labiore inferiore rotundato-trilobato; stamina longe exserta, filamentis glabris, antherarum loculis anticis coalitis. *Nuculæ* valde immaturæ tantum visæ, oblongæ, glabræ, nudæ.

HUPEH: Patung district (*A. Henry*, 4014!); SZECHUEN: South Wushan (*A. Henry*, 5415!). Herb. Kew.

We at first regarded this as a distinct species and described it as such; but on comparing it again we take it to be a variety of the polymorphous *S. japonica*, Thunb., remarkable for the deep red of the underside of the leaves and the very small corollas and large exserted stamens, the latter perhaps a sexual character.

Var. **parvifoliola**, *Hemsl.*

Foliola numerosa, parva, crenato-denticulata. *Flores* interdum pollicares, corolla calyce plus quam duplo longior, staminibus inclusis.

HUPEH: Ichang, Fang, and Patung (*A. Henry*, 340, 813, 1183, 1203, 3772!); SZECHUEN (*Faber*!). Herb. Kew.

3. **Salvia Maximowicziana**, *Hemsl.*, n. sp.

Herba perennis, erecta, glanduloso-pilosa, circiter tripedalis, caulibus tetragonis infra inflorescentiam simplicibus. *Folia* petiolata (radicalia longissime), membranacea, orbiculari-cordata vel ovato-cordata, absque petiolo 2–2½ poll. longa lataque, grosse crenato-dentata, dentibus acutis vel rarius obtusiusculis, interdum duplicato dentata simul obscure lobulata, apice rotundata vel acuminata, utrinque parce hispidula, subtus pallidiora et sat conspicue venosa; petiolus foliorum radicalium usque ad 8 poll. longus, sursum gradatim brevior, gracilis, glanduloso-pilosus. *Flores* flavidi vel rosei (*Henry*), glanduloso-pilosi, circiter pollicares, laxe racemoso-paniculati, in axillis bractearum parvarum solitarii, breviter pedicellati; calyx fructifer latior quam longus late apertus, dorso tricostatus, costis lateralibus anguste alatis, subæqualiter bilabiatus, labio postico lato unidentato subite acuminato leviter reflexo, labio antico bidentato, dentibus fere aculeiformibus demum leviter incurvis; corolla leviter ventricosa, intus parcissime pilosula et prope basin obscure annulata, labio postico breviore cucullato, labio antico trilobato lobis lateralibus multo minoribus rotundatis vel fere truncatis rectis, intermedio etiam truncato basi supra laterales constricto; stamina breviter exserta, filamentis apice barbatis connectivisque dilatatis. *Nuculæ* amplæ, compressæ, subdiscoideæ, nudæ, glabræ, longitudinaliter venosæ.

HUPEH: Fang (*A. Henry*!). Herb. Kew.

We have much pleasure in naming this very distinct *Salvia* after Mr. C. J. Maximowicz, whose labours on the botany of the far East extend over a period of nearly forty years, and are invaluable to those who have followed him.

Its exact affinity is not obvious, for it does not agree in all particulars with any of the proposed sections. The abruptly acuminate upper lip of the calyx and the almost obsolete annulus in the corolla-tube are peculiar. Thin, orbicular-cordate, thickly serrate or crenate leaves, and a loose inflorescence with geminate, or rather solitary flowers in the axils of the opposite bracts, characterize the species.

4. **Salvia miltiorrhiza,** *Bunge, Enum. Pl. Chin. Bor.* p. 50; *Benth. Lab.* p. 717, et *in DC. Prodr.* xii. p. 277; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475, et *in Mél. Biol.* xi. p. 304; *Franchet, Pl. David.* p. 236, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 243; *Debeaux, Fl. Tchef.* p. 109.

Salvia pogonocalyx, *Hance in Journ. Linn. Soc.* xiii. p. 85.

CHIHLI: near Peking (*Bunge*! *Bushell*! *Bretschneider*! *Williams*! *Hancock*!); SHINGKING: Talienhwan (*Birnie*! *Swinhoe*!); SHANTUNG: Chefoo (*Perry*!); KIANGSU: Shanghai

(*Carles*!); KIANGSI: Kiukiang and other localities (*Shearer*! *Maries*!); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*!). Mus. Brit.; Herb. Kew.

[*Salvia officinalis*, Linn., is cultivated in China.]

5. **Salvia Piasezkii,** *Maxim. in Mél. Biol.* xi. p. 304.

SHENSI or KANSUH: on the Tsunglin range of mountains (*Piasezki* ex *Maximowicz*).

6. **Salvia plebeia,** *R. Br. Prodr. Fl. Nov. Holl.* p. 501; *Benth. in DC. Prodr.* xii. p. 355, et *Fl. Hongk.* p. 277; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475; *Debeaux, Fl. Tchef.* p. 110, et *Fl. Shangh.* p. 46; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Franchet, Pl. David.* p. 237, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 243; *Hook. f. Fl. Brit. Ind.* iv. p. 655.

Salvia minutiflora, *Bunge, Enum. Pl. Chin. Bor.* p. 50.

CHIHLI and SHANTUNG to SZECHUEN, KWANGTUNG, HONGKONG, and FORMOSA: nearly all collectors. Mus. Brit.;

India and Malaya to Japan and Australia.

7. **Salvia Prionitis,** *Hance in Journ. Bot.* 1870, p. 74.

KWANGTUNG: Whampoa (*Hance*, 15511!). Mus. Brit.; Herb. Kew.

This is probably a reduced state of the polymorphous *S. japonica*, Thunb.

8. **Salvia Przewalskii,** *Maxim. in Mél. Biol.* xi. p. 301.

KANSUH: in the western alpine region, in woody pastures (*Przewalski* ex *Maximowicz*).

9. **Salvia Roborowskii,** *Maxim. in Mél. Biol.* xi. p. 302.

KANSUH: western alpine region, on slopes and among rubbish (*Przewalski* ex *Maximowicz*).

10. **Salvia scapiformis,** *Hance in Journ. Bot.* 1885, p. 368; *Bot. Mag.* t. 6980.

FORMOSA: Kelung (*Oldham*, 371! var. foliis nonnullis distincte trifoliolatis, foliolis lateralibus multo minoribus reniformibus), near Tamsui (*Ford*!); SZECHUEN: mount Omei at 6000 ft. (*Faber*!). Mus. Brit.; Herb. Kew.

11. Salvia umbratica, *Hance in Journ. Bot.* 1870, p. 75; *Franchet, Pl. David.* p. 236.

CHIHLI: near Peking (*Bretschneider*! *Bullock*!), Jehol (*David*, 2122!). Mus. Brit.; Herb. Kew.

[*Rosmarinus officinalis*, Linn., a native of the Mediterranean region, is sedulously cultivated both in China and Japan according to Loureiro, Franchet, and Bretschneider.]

1. Lophanthus rugosus, *Fisch. et Mey. Ind. Sem. Hort. Petrop.* i. 1835, p. 30; *Benth. in DC. Prodr.* xii. p. 369; *Franchet, Pl. David.* p. 237, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 242; *Franch.* et *Savat. Enum. Pl. Jap.* i. p. 375.

Lophanthus chinensis, *Walp. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 375?

CHIHLI: Jehol (*David*, 2035!), foot of mount Conolly (*Bullock*!); SHINGKING: Kaichow to Kiuchow (*Ross*!); SHANTUNG: Chefoo (*Forbes*!); HUPEH: Ichang, Patung and immediate neighbourhood (*A. Henry*!); SZECHUEN: mount Omei at 3000 ft. (*Faber*); KWANGTUNG: Lofaushan (*Ford*!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

[*Lophanthus chinensis*, Benth. (DC. Prodr. xii. p. 369), syn. *Hyssopus Lophanthus*, Linn. (Sp. Pl. ed. 1, p. 569), is a native of Siberia, and it is also recorded from North China, though probably not found within China proper.]

[Loureiro (Fl. Cochinch. p. 364) states that *Betonica officinalis*, Linn., is cultivated in China; but according to Bretschneider (Early Res. p. 167) the Chinese name cited by the former is applied to *Lophanthus rugosus*, Fisch. et Mey., a plant commonly cultivated, in North China at least.]

1. Nepeta Cataria, *Linn. Sp. Pl.* ed. 1, p. 570; *Benth. in DC. Prodr.* xii. p. 383; *Hance in Journ. Bot.* 1880, p. 300; *Hook. f. Fl. Brit. Ind.* iv. p. 662.

CHINA: without locality (*Everard*!); SHANTUNG: Chefoo (*Swinhoe*, hb. *Hance*, 2275!); HUPEH: Patung, cultivated (*A. Henry*!). Mus. Brit.; Herb. Kew.

Western Europe to Afghanistan and North-west India. Perhaps introduced in China.

2. **Nepeta cærulescens,** *Maxim. in Mél. Biol.* xi. p. 306.

Kansuh: western alpine region on the Upper Hoangho (*Przewalski* ex *Maximowicz*).

3. **Nepeta Everardi,** *S. Moore in Journ. Bot.* 1875, p. 135; *Franchet, Pl. David.* p. 238.

Chekiang: Ningpo (*Everard*!); Hupeh: Ichang and immediate neighbourhood, and Nanto and the mountains to the northward (*A. Henry*, 1132, 1986, 3987 !); Southern Shensi (*David* ex *Franchet*); Szechuen: above Wan and at Suifu (*Faber*!). Herb. Kew.

The specimens from Hupeh and Szechuen differ from the one specimen on which the species was founded in the flowers being much more numerous and only about half the size, and in the upper lip of the corolla being proportionately longer.

✓ 4. **Nepeta Fordii,** *Hemsl.*, n. sp.

Herba parcissime hispidulo-puberula, caulibus debilibus adscendentibus tetragonis, internodiis quam folia subæquantibus. *Folia* longe graciliterque petiolata, fere membranacea, exacte cordiformia, absque petiolo 1–1½ poll. diametro, late crenata, apice rotundata, simul sæpius obscure apiculata, supra brevissime parcissimeque hispidulo-puberula vel glabrescentia, subtus pallidiora, sat conspicue glanduloso-punctata, venis primariis lateralibus utrinque 3–4 inconspicuis; petiolus gracilis, laminam sæpius æquans, interdum excedens. *Flores* cærulei (*Ford*), 4–5 lineas longi, anguste cymoso-racemosi, brevissime pedicellati, racemis terminalibus, cymis 3–6-floris breviter pedunculatis inferioribus in axillis foliorum superiorum; calyx hispidus, tubulosus, sursum leviter ampliatus, 15-nervius, subæqualiter 5-dentatus, dentibus anguste lanceolatis subobtusis leviter patentibus; corolla quam calyx duplo longior, parcissime pilosula, fauce ampliata, labio postico brevissimo emarginato fere complicato stamina exserta amplectenti, labio antico subhorizontali late rotundato-reniformi emarginato basi valde constricto lobis lateralibus obsoletis; stamina 4, breviter exserta, filamentis filiformibus glabris. *Nuculæ* (maturæ non visæ) oblongo-ovoideæ, nudæ, glabræ.

Kwangtung: without locality (*Ford*, 139 !). Herb. Kew.

Similar in foliage to *N. Glechoma*, Benth., but the leaves are quite heart-shaped instead of kidney-shaped or rotundate; and more like *N. Cataria*, Linn., and *N. calaminthoides*, Benth., in inflorescence, though quite distinct from both in the calyx and corolla.

5. **Nepeta Glechoma,** *Benth. Lab.* p. 485, et *in DC. Prodr.* xii. p. 391, et *Fl. Hongk.* p. 277; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Debeaux, Fl. Shangh.* p. 46 (var. hirsuta); *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 42; *Franchet, Pl. David.* p. 238; *Miq. in Journ. de Bot. Néerl.* i. (1861), p. 115 (var. sinensis).

Glechoma hederacea, *Linn. Sp. Pl.* ed. 1, p. 578 (Glecoma); *Henriques in Bol. Soc. Brot.* iii. p. 144.

CHIHLI: Jehol (*David* ex *Franchet*); SHINGKING: various localities (*Webster*! *Ross*! *James*!); SHANTUNG: Chefoo (*Hancock*!); KIANGSU: Shanghai (*Maingay*!); FORMOSA: Tamsui district (*Watters*!); HUPEH: various localities (*A. Henry*!); HONGKONG (*Hance*!). Mus. Brit.; Herb. Kew.

Western Europe through Siberia to Kamtschatka and Japan.

6. **Nepeta lavandulacea,** *Linn. f. Suppl.* p. 272; *Benth. in DC. Prodr.* xii. p. 370; *Ledeb. Fl. Ross.* iii. p. 372; *Franchet, Pl. David.* p. 237.

CHINA: Siwan (*David* ex *Franchet*).

Siberia, Mongolia, and Mandshuria.

7. **Nepeta leucophylla,** *Benth. Lab.* p. 476, et *in DC. Prodr.* xii. p. 381; *Hook. f. Fl. Brit. Ind.* iv. p. 662; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 14.

YUNNAN (ex *Kanitz*).

Western temperate Himalaya, but not hitherto recorded from the intermediate country.

8. **Nepeta tenuifolia,** *Benth. Lab.* p. 468, et *in DC. Prodr.* xii. p. 370; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475, et *in Mél. Biol.* ix. p. 447; *Franchet, Pl. David.* p. 237.

Nepeta botryoides, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 109, nec *Ait.*

CHIHLI: near Peking, and between Peking and Jehol (*Staunton*! *David*! *Skatschkoff*! *Bretschneider*! *Bullock*!). Mus. Brit.; Herb. Kew.

Japan.

1. **Dracocephalum Faberii**, *Hemsl.*, n. sp.

Herba perennis, fere glabra, caulibus debilibus simplicibus infra medium sæpius aphyllis. *Folia* longiuscule petiolata vel suprema subsessilia, ut videtur subcarnosa, circumscriptione variabilia sed sæpius cordato-lanceolata vel late cordiformia, interdum basi truncata vel subcuneata, absque petiolo usque ad 4¼ poll. longa sed sæpius breviora, plus minusve acuminata, fere integra, obscure calloso-denticulata vel distincte crenata, cito glabrescentia, venis primariis paucis conspicuis; petiolus puberulus, usque ad 2½ poll. longus sed sæpius brevior. *Flores* purpurei vel roseo-albi, 1½–2 poll. longi, pseudo-racemosi vel interdum congesti, brevissime pedicellati, bracteis parvis patentibus subtendi, racemis axillaribus terminalibusve paucifloris 2–3 poll. longis; calyx hispidulus vel fere glaber, angustus, leviter obliquus, dentibus brevibus vel elongatis fere rectis; corollæ tubus angustus, fere rectus, labio postico late rotundato-bilobato (circiter 6 lineas diametro), labio antico minore, lobis lateralibus parvis; stamina vix exserta, filamentis glabris. *Nuculæ* fere nigræ, glabræ, oblongæ vel anguste obovoideæ.

SZECHUEN: mount Omei at 2500 to 4000 ft. (*Faber*!), North Wushan (*A. Henry*!). Herb. Kew.

The dwarf stems leafless below the middle and somewhat fleshy leaves characterize this species.

2. **Dracocephalum grandiflorum**, *Linn. Sp. Pl.* ed. 1, p. 595; *Benth. in DC. Prodr.* xii. p. 399; *Franchet, Pl. David.* p. 238.

Dracocephalum altaiense, *Laxm. in Nov. Comm. Petrop.* xv. p. 556; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 42.

Dracocephalum rupestre, *Hance in Journ. Bot.* 1869, p. 166.

CHIHLI: mountains west of Peking (*Moellendorff*! *David*! *Hancock*!). Mus. Brit.; Herb. Kew.

Dahuria and Siberia to Kamtschatka.

We have followed Franchet in referring *D. altaiense*, Laxm., to *D. grandiflorum*, Linn.

✓ 3. **Dracocephalum Henryi**, *Hemsl.*, n. sp.

Herba perennis, parcissime puberula, erecta, caulibus simplicibus 1½–2-pedalibus paucifoliatis. *Folia* ampla, longissime petiolata, membranacea, rotundato-cordata, ovato-cordata vel suprema subsessilia, ovata, absque petiolo usque ad 6 poll. longa, longe acuminata, vix acuta, grosse crenato-serrata, utrinque pilis brevibus appressis parcissime instructa; petiolus gracilis, patens, usque ad 4 poll. longus. *Flores* rosei vel lilacini (teste *Henry*), circiter sesquipollicares, racemosi, brevissime pedicellati, bracteis parvis foliaceis subtendi, racemis densis breviter pedunculatis axillaribus terminalibusve 2–4 poll. longis suberectis; calyx fructifer hispidulus, rigidiusculus, circiter semipollicaris, latus, oblique bilabiatus, labio postico longiore patentim trilobato lobis oblongis acutis, labio antico alte bifido lobis similis; corollæ parce puberulæ tubo infra medium angusto ab medio sursum gradatim oblique expanso 4–5 lineas diametro; corollæ limbus parvus, labiis subæquilongis, labio postico galeato bilobato inflexo, labio antico recto undulato lobis lateralibus brevissimis; stamina sub galea inclusa, filamentis glabris. *Nuculæ* subtrigono-ellipsoideæ, nigræ, parce puberulæ.

HUPEH: South Patung and Kuei (*A. Henry*!). Herb. Kew.

Readily distinguished by its few large, thin, spreading, broadly cordate leaves on very long stalks and racemose flowers, with foliaceous bracts shorter than the calyx.

4. **Dracocephalum imberbe,** *Bunge, Enum. Pl. Alt. Crit.* p. 38, ex *Ledeb. Fl. Ross.* iii. p. 385; *DC. Prodr.* xii. p. 398; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 9.

KANSUH (ex *Kanitz*).

Siberia.

5. **Dracocephalum Moldavica,** *Linn. Sp. Pl.* ed. 1, p. 595; *Benth. in DC. Prodr.* xii. p. 401; *Hook. f. Fl. Brit. Ind.* iv. p. 665; *Franchet, Pl. David.* p. 239; *Ledeb. Fl. Ross.* iii. p. 388.

Dracocephalum fœtidum, *Bunge in Ledeb. Fl. Alt.* ii. p. 386; *Benth. in DC. Prodr.* xii. p. 401; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 475.

CHIHLI: near Peking (*Bretschneider*! *Hancock*!), Jehol *David*!); SHENSI or KANSUH: Tsunglin range (*Piasezki* ex *Maximowicz* in litt.). Mus. Brit.; Herb. Kew.

South-eastern Europe to North-western India, Dahuria, Siberia, and Mandshuria.

6. **Dracocephalum Ruyschianum,** *Linn. Sp. Pl.* ed. 1, p. 595; *Benth. in DC. Prodr.* xii. p. 401; *Ledeb. Fl. Ross.* iii. p. 389; *Franchet, Pl. David.* p. 240.

CHIHLI: Jehol (*David* ex *Franchet*).

North-western Europe, through Siberia to Mandshuria and Japan.

7. **Dracocephalum tanguticum,** *Maxim. in Mél. Biol.* xi. p. 307; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 11.

KANSUH: Western Alpine regions (*Przewalski* ex *Maximowicz*).

8. **Dracocephalum urticifolium,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 109; *Franch. et Savat. Enum. Pl. Jap.* i. p. 375.

Cedronella urticifolia, *Maxim. in Mél. Biol.* xii. p. 528.

Dracocephalum sinense, *S. Moore in Journ. Linn. Soc.* xvii. p. 385, t. 16. f. 7.

SHINGKING: numerous localities (*Ross*! *Webster*! *James*!); HUPEH: Patung district (*A. Henry,* 205, 237, 751!); SZECHUEN: North Wushan and other localities (*A. Henry*!). Herb. Kew.

Var.? **pedunculatum,** *Hemsl.*; floribus in cymas parvas distincte pedunculatas dispositis.

HUPEH: various localities (*A. Henry*!). Herb. Kew.

The species, as here extended, is an exceedingly variable plant in the size and cutting of the leaves, in the number of flowers in an axil, from one to several, nearly sessile, or in distinctly pedunculate cymes, and in the length and teeth of the calyx.

Mr. Maximowicz refers it to the genus *Cedronella* on account of its great similarity to the North-American *C. cordata*, Benth. We have not followed him, because it is difficult to decide where to stop when dealing with such very artificial genera; but from a cursory examination, the alternative of removing *Cedronella cordata* from its very different-looking present congeners suggests itself.

1. **Scutellaria adenophylla,** *Miq. in Journ. de Bot. Néerl.* i. (1861), p. 117.

SOUTH-EAST CHINA: Fukwing (*Krone* ex *Miquel*).

2. **Scutellaria angulosa,** *Benth. in Wall. Pl. As. Rar.* i. p. 67, *Lab.* p. 444 (sub S. scandente), et *in DC. Prodr.* xii. p. 430; *Hook. f. Fl. Brit. Ind.* iv. p. 669.

Scutellaria scandens, *D. Don, Prodr. Fl. Nep.* p. 110.

HUPEH: Ichang and immediate neighbourhood, and South Patung (*A. Henry*, 3559! 6087!). Herb. Kew.

Himalaya mountains, from Kashmir to Nepal.

3. **Scutellaria baikalensis,** *Georgi, It.* i. p. 223, et *Beschr. des Russ. Reichs,* iii. 5, p. 1097, ex *Ledeb. Fl. Ross.* iii. p. 397.

Scutellaria macrantha, *Fisch. in Reichb. Pl. Crit.* v. p. 52; t. 488; *Benth. Lab.* p. 436, et *in DC. Prodr.* xii. p. 424; *Franchet, Pl. David.* p. 240 (var. glabrescens), et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 242; *Debeaux, Fl. Tchef.* p. 110 (var. pubescens); *Franch. et Savat. Enum. Pl.* i. p. 377.

Scutellaria grandiflora, *Adams,* ex *Bunge, Enum. Pl. Chin. Bor.* p. 52, non *Sims.*

Scutellaria lanceolaria, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 110, ex *Franch. et Savat.*

CHINA: without locality (*Fortune,* 16!); CHIHLI: near Peking and other localities (*Bunge*! *Bretschneider*! *Bullock*! *Williams*! *Hancock*! *Moellendorff*!); SHANTUNG: Chefoo (*Maingay*! *Faber*! *Hancock*!). Mus. Brit.; Herb. Kew.

Dahuria to Mandshuria and Japan.

4. **Scutellaria dependens,** *Maxim. Prim. Fl. Amur.* p. 219; *Franch. et Savat. Enum. Pl. Jap.* i. p. 377.

Scutellaria Oldhami, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 197, teste *Maxim. in sched. in herb. Kew.*

COREAN ARCHIPELAGO: Long Reach (*Oldham*, 601!). Herb. Kew.

Japan and Mandshuria.

Maximowicz notes on the label referred to above "nimis affinis *S. minori*, Linn.," and Oldham's specimens are not distinguishable in foliage from that species, but they do not bear good flowers.

5. **Scutellaria galericulata,** *Linn. Sp. Pl.* ed. 1, p. 599; *Benth. in DC. Prodr.* xii. p. 425; *Hance in Journ. Linn. Soc.* xiii. p. 86; *Hook. f. Fl. Brit. Ind.* iv. p. 670; *Miyabe in Mem. Bost. Soc. Nat. Hist.* iv. p. 255.

Scutellaria scordifolia, *Fisch. Ind. Hort. Petrop.* p. 62; *Benth. in DC. Prodr.* xii. p. 425; *Franch. et Savat. Enum. Pl. Jap.* i. p. 377; *Franchet, Pl. David.* p. 240 (forma glabrescens); *Debeaux, Fl. Tchef.* p. 111 (forma pubescens); *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 42.

CHIHLI: Jehol and Pohuashan (*David*!), river Hunho (*Hancock*!); SHANTUNG: Chefoo (*Hancock*!); CHEKIANG: Ningpo

(*Savatier* ex *Franchet*); COREA: Port Chusan (*Wilford*, 951!); COREAN ARCHIPELAGO: Long Reach (*Oldham*, 597!). Mus. Brit.; Herb. Kew.

Western Europe to Japan and Kamtschatka, and widely spread in North America. Most of the Chinese specimens are of the variety *scordifolia*.

6. **Scutellaria hederacea**, *Kunth et Bouché, Ind. Sem. Hort. Berol.* 1845, p. 10, ex *Benth. in DC. Prodr.* xii. p. 426; *A. Gray in Perry's Jap. Exped.* ii. p. 316.

LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

Gray records this plant from Simoda, though the Kew specimen is labelled "Loo Choo Islands."

It has been suggested as perhaps a form of *S. dependens* (Franch. et Savat. Enum. Pl. Jap. i. p. 378), but it is quite distinct, or at least easily distinguished by its foliage, which is singularly like that of *Veronica hederacea*, Linn. Miquel (Ann. Mus. Bot. Lugd.-Bat. ii. p. 114) asks whether it may not be his *Ajuga japonica*, a question answered by Gray if he correctly determined Wright's specimens.

7. **Scutellaria indica**, *Linn. Sp. Pl.* ed. 1, p. 600; *Benth. in DC. Prodr.* xii. p. 417, et *Fl. Hongk.* p. 278; *Franch. et Savat. Enum. Pl. Jap.* i. p. 376; *Franchet, Pl. David.* p. 240 (var. pekinensis), et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 243; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 42; *Henriques in Bol. Soc. Brot.* iii. p. 144.

Scutellaria pekinensis, *Maxim. Prim. Fl. Amur.* p. 476.

Scutellaria japonica, *Morr. et Decne. in Ann. Sc. Nat.* 4^{me} série, ii. p. 315.

CHIHLI, SHINGKING, and COREA to HUPEH, HONGKONG, FORMOSA, and the LUCHU ARCHIPELAGO (*Fortune*! *Hinds*! *Wright*! *Bretschneider*! *Oldham*! *Vachell*! and numerous other collectors). Mus. Brit.; Herb. Kew.

Eastern Siberia, Mandshuria, and Japan.

An exceedingly variable species in stature, foliage, and degree of hairiness. Specimens collected by Ford in the Taimo mountains opposite Hongkong are almost scapose in habit, with crowded, thick, very hairy leaves and long, naked flower-spikes; but Dr. Henry sends specimens from Nanto intermediate in character between this and ordinary *S. indica*, Linn.

8. **Scutellaria leucodasys,** *Miq. in Journ. de Bot. Néerl.* i. p. 116.

SOUTH-EAST CHINA: Pukak (*Krone* ex *Miquel*).

9. **Scutellaria luzonica,** *Rolfe in Journ. Linn. Soc.* xxi. p. 315?

FORMOSA: Takow (*Playfair*!). Herb. Kew.

Philippine Islands.

The specimens are insufficient for satisfactory determination.

✓ 10. **Scutellaria obtusifolia,** *Hemsl.*, n. sp.

Herba perennis, pubescens, ramosa, adscendens, caulibus graciliusculis simul rigidis sublignosis obsolete tetragonis, floriferis 6–18 poll. longis. *Folia* longe petiolata, papyracea, rigidiuscula, obovata, oblonga, ovata vel interdum fere orbicularia, maxima absque petiolo sesquipollicaria, apice obtusissima vel rotundata, basi rotundata vel cuneata, integra vel obscurissime paucicrenata, supra pallide viridia, scabrida, subtus cinereo-hispidula et conspicue venosa; petiolus gracilis, 3–9 lineas longus. *Flores* cærulei (teste *Henry*), 12–15 lineas longi, pauci in racemos terminales parvibracteatas dispositi, brevissime pedicellati, bracteis foliaceis stipitatis calycem non æquantibus, pedicellis calycibusque minute glanduloso-hirsutis; calyx (fructifer maturus non visus) parvus, squama maxima erecta instructus; corollæ tubus basi fere æqualis, leviter curvatus, galea dorso puberula.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); SZECHUEN: mount Omei at 3000 to 3500 ft. (*Faber*!). Herb. Kew.

Characterized by distinctly petiolate, usually obovate, very obtuse or rounded, somewhat rigid leaves, pale green above and grey beneath.

11. **Scutellaria rivularis,** *Wall. Pl. As. Rar.* i. p. 66; *Benth. Lab.* p. 438, et *in DC. Prodr.* xii. p. 426; *Hance in Journ. Bot.* 1880, p. 300; *Hook. f. Fl. Brit. Ind.* iv. p. 670; *Wight, Ic. Pl. Ind. Or.* t. 1450.

Scutellaria barbata, *D. Don, Prodr. Fl. Nep.* p. 109 (hujus speciei nomen primarium cum descriptione).

CHEKIANG: Ningpo (*Cooper*!); FOKIEN: Amoy (*Fortune*, 13!); FORMOSA: Tamsui and other localities (*Oldham*, 368! *Swinhoe*! *Playfair*!); HUPEH: Ichang (*A. Henry*!); KWANG-

TUNG: Macao (*Callery*!), borders of rice-fields, Saichusan (*Sampson*, hb. *Hance*, 10910!). Mus. Brit.; Herb. Kew.

Mountains of North and South India and Tenasserim.

12. **Scutellaria sciaphila,** *S. Moore in Journ. Bot.* 1875, p. 228; *Hemsl. in Journ. Bot.* 1876, p. 208.

SHANTUNG: Chefoo (*Carmichael* in hb. *Forbes*!); KIANGSI: Kiukiang (*Shearer*!). Herb. Kew.

13. **Scutellaria sessilifolia,** *Hemsl.*, n. sp.

Herba, ut videtur, perennis, glabra vel cito glabrescens, caulibus gracillimis simplicibus adscendentibus 4-angulatis circiter semipedalibus, internodiis quam folia sæpius dimidio brevioribus. *Folia* sessilia, semiamplexicaulia, papyracea vel fere coriacea, cordato-ovata vel inferiora rotundata, maxima vix pollicaria, obtusa vel subacuta, utrinque sæpius obscure 3-crenata, primum pilis crassis flaccidis parcissime instructa, venis primariis utrinque sæpius 3 inconspicuis, venis ultimis obsoletis. *Flores* puberuli, 7–8 lineas longi, pauci (3–7) in racemos axillares gracillimos folia subduplo superantes dispositi, breviter pedicellati, bracteis minutis, pedunculis filiformibus; calycis squama per anthesin parva latior quam longa; corollæ tubus latus basi distincte saccatus.

SZECHUEN: mount Omei at 4000 to 9000 feet (*Faber*!). Herb. Kew.

The slender stems with crowded sessile stem-clasping leaves, having few obscure crenations, and the small flowers in very slender axillary racemes, characterize this species, which is not very near any of the other Chinese or Indian species.

14. **Scutellaria stenosiphon,** *Hemsl.*, n. sp.

Species ex affinitate *S. angulosæ* foliis minoribus crassioribus integris vel obscurissime crenatis sæpius obtusis, racemis lateralibus minus foliaceis, bracteis minoribus, pedicellis longioribus, floribus minoribus, corollæ tubo gracillimo.

KWANGTUNG: Lofaushan, cultivated specimen from the Hongkong botanic garden (*Ford*!). Herb. Kew.

15. **Scutellaria strigillosa,** *Hemsl.*, n. sp.

Herba perennis, pumila, tota dense strigilloso-hirsuta, caulibus simplicibus vel ramosis 3–4 poll. altis. *Folia* confertissima, brevissime petiolata, crassa, oblonga, circiter semipollicaria, obtusa

vel rotundata, basi sæpius cordata, utrinque plus minusve indistincte paucicrenato-dentata. *Flores* dense glanduloso-hirsuti, pauci in axillis foliorum superiorum solitarii, circiter semipollicares, brevissime pedicellati.

SHINGKING: Talienhwan (*Swinhoe*, hb. *Hance*, 6523!); SHANTUNG: Chefoo (*Perry*!). Mus. Brit.; Herb. Kew.

A very dwarf habit, and thick, crowded, densely strigillose leaves distinguish this species.

16. **Scutellaria violacea,** *Heyne* ex *Benth. in Wall. Pl. As. Rar.* i. p. 66, *Lab.* p. 429, et *in DC. Prodr.* xii. p. 418; *Hook. f. Fl. Brit. Ind.* iv. p. 668; *Wight, Ic. Pl. Ind. Or.* t. 1449?

KIANGSI: Kiukiang (*Shearer*!). Herb. Kew.

North and South India and Ceylon.

The Chinese specimen is doubtingly referred to this species, as it has no perfect flowers.

17. **Scutellaria viscidula,** *Bunge, Enum. Pl. Chin. Bor.* p. 52; *Benth. Lab.* p. 435, et *in DC. Prodr.* xii. p. 424.

NORTH CHINA (*Bunge*!). Herb. Kew.

This is probably an unusually hairy state of *S. macrantha*, Fisch.

1. **Chelonopsis Benthamiana,** *Hemsl.*

Bostrychanthera deflexa, *Benth. in Benth. et Hook. f. Gen. Plant.* ii. p. 1216.

FOKIEN: Amoy interior (*Swinhoe*!); HUPEH: Chienshih (*A. Henry*!). Herb. Kew.

Specimina Henryana multo meliora foliis duplo majoribus, et cymis erectis (normalibus) nec deflexis ut in specimine Swinhoëano, unde nomen specificum mutatum est.

It is evident that this and the next are congeners, although the fruit of *C. Benthamiana*, Hemsl., is unknown. Further, there is no doubt that the deflexed position of the flowers in the specimen on which the genus was founded was accidental. The calyx is much smaller in the flowering-stage of the present species.

2. **Chelonopsis moschatus,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 111; *Maxim. in Mél. Biol.* ix. p. 443; *Franch. et Savat. Enum. Pl. Jap.* i. p. 378, var. foliis minute serratis.

CHEKIANG: Ningpo mountains (*Faber*, comm. *Ford*, 73!). Herb. Kew.

Japan.

Exceedingly variable in the shape and toothing of the leaves.

1. **Prunella vulgaris,** *Linn. Sp. Pl.* ed. i. p. 600; *Benth. in DC. Prodr.* xii. p. 410 (Brunella); *Hance in Journ. Bot.* 1882, p. 38; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Franchet, Pl. David.* p. 241, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 243; *Hook. f. Fl. Brit. Ind.* iv. p. 670.

KANSUH and SHINGKING to HUPEH, SZECHUEN, and FORMOSA (*Ross*! *Oldham*! *Fortune*! and numerous other collectors). Mus. Brit.; Herb. Kew.

North temperate regions, the Andes, and Australasia.

1. **Marrubium incisum,** *Benth. Lab.* p. 586, et *in DC. Prodr.* xii. p. 447; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Hance in Journ. Bot.* 1882, p. 38; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Debeaux. Fl. Tients.* p. 35; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 9.

Leonurus supinus, *Steph. in Willd. Sp. Pl.* iii. p. 116; *Bunge, Enum. Pl. Chin. Bor.* p. 51.

CHIHLI: near Peking (*Bunge*! *Bushell*! *Bretschneider*!); SHINGKING: various localities (*Ross*! *Webster*!); CHEKIANG: Ningpo (*Everard*!); HUPEH: Ichang (*A. Henry*!); KANSUH (ex *Kanitz*); SZECHUEN (*Faber*!). Mus. Brit.; Herb. Kew.

Siberia and Mandshuria.

1. **Anisomeles ovata,** *R. Br. in Ait. Hort. Kew.* ed. 2, ii. p. 364; *Benth. Lab.* p. 702, *in DC. Prodr.* xii. p. 455, et *Fl. Hongk.* p. 278; *Hook. f. Fl. Brit. Ind.* iv. p. 672; *Walp. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 375; *Henriques in Bol. Soc. Brot.* iii. p. 141.

HUPEH, KWANGTUNG, HONGKONG, FORMOSA (*Millett*! *Fortune*! *Oldham*! *Seemann*! and other collectors). Mus. Brit.; Herb. Kew.

Tropical and subtropical India.

1. **Colquhounia coccinea,** *Wall. in Trans. Linn. Soc.* xiii. p. 608, et *Tent. Fl. Nep.* i. p. 13, t. 6; *Benth. in DC. Prodr.* xii. p. 457; *Hook. Fl. Brit. Ind.* iv. p. 764; *Bot. Mag.* t. 4514?

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3334!). Herb. Kew.

North India, from Kumaon to Sikkim.

The Chinese specimens are hardly sufficient to determine the species. Dr. Henry describes them as from stems 10 to 15 feet long, hanging down the face of rocks, and as having red flowers. The Indian specimens differ widely from different localities.

503 1. **Stachys adulterina,** *Hemsl.*, n. sp.

Herba perennis, tuberosa, fere omnino glabra, 2–4-pedalis, caulibus distincte tetragonis simplicibus, internodiis quam folia interdum longioribus. *Folia* præter pauca superiora distincte petiolata, membranacea, oblongo-lanceolata cum petiolo usque ad 6 poll. longa (inferiora minora (radicalia non visa) interdum fere rotundata), sæpius acuta, basi sæpius rotundata, interdum subcuneata interdum subcordata, serrato-crenata, glabra vel parcissime strigillosa, venosa, petiolo canaliculato marginibus sæpius ciliolatis. *Flores* rubri vel albi (*A. Henry*), circiter 9 lineas longi, subsessiles, verticillastris paucis circiter 6-floris; calyx hispidulus, leviter obliquus, quam corolla dimidio brevior, distincte 5-costatus, dentibus latis deltoideis obtusiusculis callosis (i. e. costis crassis brevissime excurrentibus) leviter recurvis; corollæ galea extus hirsuta, stamina includens, labio antico rotundato trilobata undulato, lobulis lateralibus paullo minoribus; stamina fere æquilonga, filamentis infra medium dilatatis villosulis. *Nuculæ* subsphæroideæ, glabræ, dorso unicostatæ.

HUPEH: Patung district and Kuei (*A. Henry*!). Herb. Kew.

This differs from *S. Sieboldi*, Miq., in being almost glabrous, and especially in the broad calyx-teeth with callous tips.

2. **Stachys arvensis,** *Linn. Sp. Pl.* ed. 2, p. 814; *Benth. in DC. Prodr.* xii. p. 477; *Ledeb. Fl. Ross.* iii. p. 415.

FORMOSA: in potato-fields (*Oldham*, 358!) Herb. Kew.

A very widely spread weed of cultivation, doubtless introduced in Formosa.

3. **Stachys aspera,** *Michx. Fl. Bor.-Am.* ii. p. 5; *Benth. in DC. Prodr.* xii. p. 471; *A. Gray, Synopt. Fl. N. Am.* ii. 1, p. 387; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 44 (varietates

plures); *Hance in Journ. Bot.* 1880, p. 300; *Franchet, Pl. David.* p. 241.

Stachys chinensis, *Bunge* ex *Benth. Lab.* p. 544, et *in DC. Prodr.* xii. p. 471; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476.

Stachys palustris, var. hispidula, *Regel, Fl. Ussur.* ex *Maxim.*

Stachys japonica, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 111, et iii. p. 197.

Stachys palustris, var. hispida, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 201.

Stachys baicalensis, *Fisch. in Benth. Lab.* p. 543, et *in DC. Prodr.* xii. p. 470; *Franch. et Savat. Enum. Pl. Jap.* i. p. 378; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476.

CHIHLI: near Peking (*Bunge*! *Bretschneider*! *Skatschkoff*!); SHINGKING: various localities (*Ross*! *James*! *Webster*!); KIANGSI: Shanghai (*Maingay*! *Faber*!); FOKIEN: Amoy (*Fortune*, 109!); COREA: Port Chusan (*Wilford*!). Mus. Brit.; Herb. Kew.

Eastern Asia and North America.

Gray, *loc. cit.*, says this is "too near *S. palustris*, Linn." See note under *S. Sieboldi*, Miq.

4. **Stachys oblongifolia**, *Benth. in Wall. Pl. As. Rar.* i. p. 64, *Lab.* p. 545, et *in DC. Prodr.* xii. p. 474; *Hook. f. Fl. Brit. Ind.* iv. p. 676.

Stachys modica, *Hance in Journ. Bot.* 1882, p. 92.

KIANGSI: Kiukiang (*Shearer*!); FORMOSA (*Swinhoe*! *Oldham*, 359!); HUPEH: various localities (*A. Henry*!). Herb. Kew.

Eastern India.

5. **Stachys Sieboldi**, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 112; *Franch. et Savat. Enum. Pl. Jap.* i. p. 379; *So Mokou Zoussetz*, xi. t. 13.

Stachys affinis, *Bunge in Pétersb. Mém. Savans Etrang.* ii. (1834), reprint, p. 51; *Pailleux et Bois in Bull. Soc. Nat. d'Acclim. France*, 1884, pp. 44 et 280, 1885, p. 196, et 1889, pp. 634 et 580, cum ic. xylogr.; *Revue Horticole*, 1885, p. 236; *Bull. Soc. Tosc. Ort.* 1886, p. 68, cum ic. xylogr.; *Le Jardin*, 1887, p. 8, cum fig.; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 243; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 46; *Sahut in Ann. Soc. Hort. et Hist. Nat. Hérault*, xxii. 1890, p. 46.

Stachys tuberifera, *Naud. in Bull. Soc. Nat. d'Acclim. France*, 1887, p. 394, nomen tantum; *Gard. Chron.* 3rd series, iii. pp. 13 et 16, fig. 1.

CHIHLI: near Peking, cult. (*Bunge*! *Bretschneider*!); HUPEH: Nanto, cult., and Patung, wild (*A. Henry*!). It is also recorded from many other localities, both wild and cultivated, and from Japan. Mus. Brit.; Herb. Kew.

Bunge's *Stachys affinis* was published (as we learn from the 'Linnæa,' ix. Literaturblätter, p. 65) in 1834, when the name was already occupied in the genus, Fresenius having so named and described (Mus. Senckenb. i. p. 91) an Arabian and Egyptian plant in 1833, as we learn from the same source (p. 37). Unforfortunately Miquel's name antedates the very appropriate one of *tuberifera*, Naud., by which it is commonly known in gardens, at least in England. It bears diverse native names in different provinces of China and Japan. In Hupeh, on the authority of Dr. A. Henry, it is cultivated under the name of "Tsanyungtzu."

Bentham (DC. Prodr. xii. p. 470) reduced *S. affinis*, Bunge, to *S. palustris*, Linn.; but we follow Maximowicz in giving it specific rank, though there is no doubt that it is difficult to define their limits and distinguish them from *S. aspera*, Michx.

1. **Leonurus macranthus,** *Maxim. Ind. Fl. Iek. in Prim. Fl. Amur.* p. 476, et *in Mél. Biol.* ix. p. 445; *Franchet, Pl. David.* p. 244, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 244; *Franch. et Savat. Enum. Pl. Jap.* i. p. 379.

Leonurus japonicus, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 112.

CHIHLI: Jehol (*David*!); SHINGKING: Peiling (*Webster*!); SHANTUNG: Chefoo and other localities (*Forbes*! *Faber*! *Maingay*!); COREAN ARCHIPLAGO: Green Island (*Oldham*, 613!). Mus. Brit.; Herb. Kew.

Japan.

2. **Leonurus sibiricus,** *Linn. Sp. Pl.* ed. 1, p. 584; *Benth. in DC. Prodr.* xii. p. 501; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Debeaux, Fl. Tients.* p. 35, *Fl. Tchef.* p. 112, et *Fl. Shangh.* p. 47; *Henriques in Bol. Soc. Brot.* iii. p. 144; *Hook. f. Fl. Brit. Ind.* iv. p. 678.

Stachys Artemisia, *Lour. Fl. Cochinch.* p. 365.

CHIHLI and SHINGKING to HUPEH, HONGKONG and FORMOSA. Mus. Brit.; Herb. Kew.

Now very widely spread in temperate and tropical regions of the Old World and America. Native of Asia.

1. **Lamium album,** *Linn. Sp. Pl.* ed. 1, p. 579; *Benth. in DC. Prodr.* xii. p. 510; *Franch. et Savat. Enum. Pl. Jap.* i.

p. 381; *Franchet, Pl. David.* i. p. 241; *Hook. f. Fl. Brit. Ind.* iv. p. 679, var. barbatum.

Lamium petiolatum, *Royle* ex *Benth. in Hook. Bot. Miscell.* iii. p. 381, et *in DC. Prodr.* xii. p. 509; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Hance in Journ. Bot.* 1878, p. 232; *A. Gray in Perry's Jap. Exped.* ii. p. 316.

Lamium barbatum, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 540.

Lamium garganicum, *Thunb. Fl. Jap.* p. 246, ex *Franchet.*

SHINGKING: various localities near Moukden and elsewhere (*Ross*! *Webster*! *James*!); CHEKIANG: Ningpo (*Oldham*!); KIANGSI: Kiukiang (*Faber*! *Maries*!); HUPEH: Patung district (*A. Henry*!); COREAN ARCHIPELAGO: Port Hamilton (*Wilford*!). Mus. Brit.; Herb. Kew.

Western Europe and North Africa to North India, Sachalin, and Japan.

2. **Lamium amplexicaule,** *Linn. Sp. Pl.* ed. 1, p. 579; *Benth. in DC. Prodr.* xii. p. 508; *Franch. et Savat. Enum. Pl. Jap.* i. p. 380; *Hook. f. Fl. Brit. Ind.* iv. p. 679.

KIANGSU: Shanghai (*Faber*!); KIANGSI: Kiukiang (*Shearer*!); FORMOSA: Tamsui (*Oldham*, 356!); HUPEH: ICHANG and immediate neighbourhood (*A. Henry*!). Herb. Kew.

Western Europe and North Africa to North India and Japan, and colonized in many other countries.

3. **Lamium chinense,** *Benth. in DC. Prodr.* xii. p. 512; *S. Moore in Journ. Bot.* 1878, p. 138.

CHEKIANG: Ningpo (*Everard*!), Tientai mountain (*Faber*!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Amoy (*Fortune*, 83!); HUPEH: Ichang and Changyang (*A. Henry*!). Mus. Brit.; Herb. Kew.

6368 Var.? **parvifolia,** *Hemsl.*; foliis multo minoribus ovato-rotundatis.

FORMOSA: without locality (*Swinhoe*!). Herb. Kew.

1. **Leucas chinensis,** *R. Br. Prodr. Fl. Nov. Holl.* p. 504; *Benth. in DC. Prodr.* xii. p. 524; *Hook. f. Fl. Brit. Ind.* iv. p. 681.

Phlomis chinensis, *Retz. Obs.* ii. p. 19.

Retzius recorded this species as Chinese, but the only specimens we have seen referred to it are from the Deccan peninsula of India.

2. **Leucas javanica,** *Benth. Lab.* p. 611, et *in DC. Prodr.* xii. p. 528.

Luchu Archipelago (*Wright*!). Herb. Kew.

Java and the Philippine Islands.

This so closely resembles *L. chinensis*, R. Br., that there may have been confusion of the two by Retzius.

3. **Leucas lanata,** *Benth. in Wall. Pl. As. Rar.* i. p. 61, et *in DC. Prodr.* xii. p. 525; *Hook. f. Fl. Brit. Ind.* iv. p. 681; *Hance in Journ. Bot.* 1878, p. 232.

Hainan: Hoihow on the western coast (*Fagg*, hb. *Hance*, 8782!). Mus. Brit.; Herb. Kew.

North and South India.

4. **Leucas mollissima,** *Wall. Pl. As. Rar.* i. p. 62; *Benth. Lab.* p. 609, et *in DC. Prodr.* xii. p. 525 (β. chinensis), et *Fl. Hongk.* p. 279; *Henriques in Bol. Soc. Brot.* iii. p. 144; *Hook. f. Fl. Brit. Ind.* iv. p. 682.

Leucas Benthamiana, *Hook. et Arn. Bot. Beech. Voy.* p. 204.

Leucas javanica, *Hook. et Arn. Bot. Beech. Voy.* p. 268, non *Benth.*

Formosa: Tamsui and other localities (*Swinhoe*! *Maries*! *Oldham*! *Playfair*!); Hupeh: Ichang, Nanto and mountains to the northward (*A. Henry*!); Szechuen: Chungking (*Faber*!); Hongkong (*Champion*! *Wright*!); Hainan (*A. Henry*!); Luchu Archipelago (*Beechey*!). Mus. Brit.; Herb. Kew.

North and South India and Ceylon.

Some of the Chinese specimens referred to this species seem to be equally as near *L. lanata*, Benth.

5. **Leucas zeylanica,** *R. Br. Prodr. Fl. Nov. Holl.* p. 504; *Benth. in DC. Prodr.* xii. p. 531; *Hook. f. Fl. Brit. Ind.* iv. p. 689; *Hance in Journ. Bot.* 1878, p. 232; *Wight, Illustr. Ind. Bot.* t. 176.

Hainan: Hoihow and other localities (*Fagg*! *Sampson*! *Hance*! *A. Henry*!). Mus. Brit.; Herb. Kew.

India, Ceylon, and Malaya.

(440 1. **Phlomis albiflora,** *Hemsl.*, n. sp.

Herba perennis, villosula, caulibus tetragonis simplicibus erectis vel adscendentibus 1–2-pedalibus. *Folia* longe petiolata, papyracea, mollia, ovata, vel caulina inferiora interdum fere

orbicularia, maxima cum petiolo 7 poll. longa, sed sæpius dimidio minora, acuminata, basi rotundata vel plus minus cuneata, crenato-dentata, interdum irregulariter, utrinque villosula, subtus pallidiora; petiolus gracilis, laminam sæpe æquans. *Flores* albi (teste *Henry*), parvi, 7–8 lineas longi, subsessiles, verticillastris sessilibus multifloris densissimis, bracteis minutissimis vel obsoletis; calyx leviter obliquus, subinflato-tubulosus, extus longe hispidulo-pilosus, intus obscure parceque strigillosus, 10-nervis, nervis alternis sinuum obscuris, subæqualiter 5-dentatus, dentibus brevibus deltoideis apice callosis; corollæ dense sericeo-villosæ tubus angustus, fere rectus, intus annulatus, quam limbus fere duplo longior; limbus subæqualiter bilabiatus, labio postico erecto angusto concavo, labio antico subæqualiter angusteque 3-lobato lobis rotundatis; stamina 4, breviter exserta, filamentis leviter barbatis, antherarum loculis divaricatis; stylus inæqualiter bifidus, stamina æquans. *Nuculæ* glabræ, triquetræ, truncatæ.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 720, 1575, 1910, 3576!). Herb. Kew.

6450 2. **Phlomis gracilis**, *Hemsl.*, n. sp.

Herba perennis ?, erecta, hispidula, caulibus tetragonis gracilibus rigidis retrorsim strigillosis simplicibus vel supra medium pauciramosis, internodiis inferioribus quam folia sæpius longioribus. *Folia* petiolata, tenuia, fere membranacea, lanceolata, cum petiolo usque ad 4 poll. longa, utrinque sæpius longe attenuata, acuta, supra basin attenuatum crenato-serrata, utrinque præcipue secus costam venasque minute strigillosa. *Flores* albi, maculosi (teste *Henry*), 8–9 lineas longi, brevissime pedicellati, in quaque axilla sæpius 2–4, interdum solitarii, interdum 5–6 aggregati; calyx turbinatus, retrorsim strigillosus, 10-nervis, dentibus e basi lata subulatis patentibus tubum fere æquantibus; corollæ tubus omnino inclusus, intus supra medium annulo piloso lobato instructus; labium posticum extus pilosum, erectum, complicatum, stamina amplectens, quam tubus dimidio longius; labium anticum patens, trilobatum, sinuatum; stamina 4, leviter exserta, antherarum loculis parallelis. *Nuculæ* (maturæ non visæ) triquetræ, glabræ, apice truncatæ simul rugosæ.

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 2089, 4111!). Herb. Kew.

Allied to *P. rugosa*, Benth., in the long calyx-teeth, but differing in the very short corolla-tube as well as in the foliage.

3. **Phlomis mongolica,** *Turcz. Fl. Baical.-Dahur.* ii. 2, p. 434; *Franchet, Pl. David.* p. 242.

SHANSI: Siaowutaishan (*Moellendorff*!). Herb. Kew.

Mongolia and Mandshuria.

As Mr. Franchet suggests, this is perhaps better regarded as a variety of *P. oreophila*, Kar. et Kir., and two or three other proposed allied species should perhaps be associated with them under *P. tuberosa*, Linn.

4. **Phlomis rugosa,** *Benth. in Wall. Pl. As. Rar.* i. p. 63, et *in DC. Prodr.* xii. p. 545; *Hook. f. Fl. Brit. Ind.* iv. p. 693?

SZECHUEN (*Faber*!); KWANGTUNG (*Ford*!). Herb. Kew.

North and East India and Malaya to the Philippine Islands.

The Chinese specimens are hardly sufficient for satisfactory determination.

5. **Phlomis umbrosa,** *Turcz. in Bull. Soc. Nat. Mosc.* 1840, p. 76; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Benth. in DC. Prodr.* xii. p. 544; *Franchet, Pl. David.* p. 241, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 244.

CHIHLI: near Peking (*Bushell*! *Bullock*! *Bretschneider*!); SHANTUNG: Chefoo mountains (*Faber*!). Herb. Kew.

634 Var. **australis,** *Hemsl.*; foliis tenuibus longe petiolatis cordato-orbicularibus grosse crenato-serratis dente terminali interdum multo longiore.

HUPEH: Ichang, Patung, Kuei, Tunglu and other localities (*A. Henry*, 875, 1872, 2442, 4749, 6029, 6179, 6423, 7360!). Herb. Kew.

All the Hupeh specimens have the appearance of having grown in shade, and the foliage is very different generally both in texture, shape, and toothing.

1. **Gomphostemma chinensis,** *Oliver in Hook. Ic. Pl.* xv. p. 54, t. 1468; *Hance in Journ. Bot.* 1887, p. 12.

FOKIEN: Amoy (*Swinhoe*!); KWANGTUNG: Lofaushan, East river (*Faber*, comm. *Ford*!); HAINAN (*Faber*, hb. *Hance*!). Mus. Brit.; Herb. Kew.

1. **Microtæna cymosa,** *Prain in Hook. Ic. Pl.* xix. t. 1872.
Plectranthus Patchouli, *Clarke in Hook. f. Fl. Brit. Ind.* iv. p. 624.

KWANGTUNG: North river (*Ford's native collector*, 24!). Herb. Kew.

Eastern India, Burma, and Cochin China.

This is a very puzzling plant, and we alternately took it to be the same as the Indian and a new species, on account of the dimorphic corolla. In the plate cited above the middle lobe of the lower lip is very narrow and tongue-like, and the first flowers we dissected of the Chinese plant had an almost equally three-lobed lower lip with rounded lobes; and the upper lip or galea of the corolla has a distinct thickened lobe on each side below the middle. On examining other flowers we found some with the lower lip like that figured, and we suspect that these may be sexual differences, for flowers with this kind of lip seem to be invariably sterile. There are nearly ripe nutlets in the Chinese specimens of a dark brown colour, very minutely puberulous or glabrous, oblong and subtrigonous, with a very small basal scar. The fruiting-calyx is enlarged, rigid, nearly or quite glabrous, and transversely nerved.

This is the plant referred to in the 'Kew Bulletin,' 1888, p. 74, in connection with Patchouli.

6582 ✓ 2. **Microtæna robusta**, *Hemsl.*, n. sp.

Herba odorifera (*Henry*), robusta, rudis, ramosa, 4–6-pedalis, undique plus minus molliter pubescens, caulibus crassis, tetragonis demum cavis. *Folia* longe petiolata, fere membranacea, late cordato-ovata vel interdum rotundato-cordata, absque petiolo usque ad 6 poll. longa (folia inferiora non visa), acuminata sed vix acuta, grossiuscule crenata, præcipue subtus breviter pubescentia; petiolus laminam æquans vel brevior. *Flores* rosei (teste *Henry*), circiter pollicares, anguste cymoso-paniculati, brevissime pedicellati, cymis densis breviter pedunculatis, paniculis terminalibus axillaribusque usque 6 poll. longis; calyx pubescens, fructifer auctus, rigidus, conspicue multinervosus, breviter 5-fidus, lobis oblongis vix acutis leviter inæqualibus (postico majore) transversim nervosis; corolla puberula, recta, tubo angusto, galea ampla, antice calloso-bilobata, labio inferiore amplo trilobato, lobis rotundatis lateralibus multo brevioribus; stamina 4, breviter exserta, filamentis arcte approximatis medio barbulatis. *Nuculæ* amplæ, atro-brunneæ, compresso-obovoideæ, glabræ.

HUPEH: Hsingshan and Fang (*A. Henry*!). Herb. Kew.

6584 3. **Microtæna urticifolia**, *Hemsl.*, n. sp.

Herba rudis, erecta, ut videtur 3–4-pedalis, parce pilosula hispidula vel puberula, caulibus tetragonis vel fere quadrangularibus crassiusculis sed non lignescentibus, internodiis quam folia brevioribus. *Folia* longissime graciliterque petiolata, permembranacea, ovata vel cordato-ovata, absque petiolo 3–5 poll. longa, sæpius longe acuminata, basi cordata, truncata, vel interdum cuneata, grosse serrata, utrinque parce strigillosa, præcipue subtus secus costam venasque pilis transversim patentibus instructa; petiolus gracilis, 2–5 poll. longus. *Flores* flavi, odorati, 1–1¼ poll. longi (teste *Henry*), laxiuscule cymoso-paniculati, breviter pedicellati, puberuli; calycis hispiduli dentes subulati, postico fere duplo longiore, saltem per anthesin, post anthesin auctus, rigidus, transversim nervosus; corollæ tubus fere rectus, angustissimus, subite late bilabiatus; galea stamina inclusa, antice infra medium utrinque insigniter calloso-lobata, labio inferiore rotundato-trilobato, lobo intermedio longiore; stamina 4, filamentis arcte approximatis infra medium barbatulatis. *Nuculæ* compresso-ovoideæ vel ellipticæ, brunneæ, nitidæ.

HUPEH: Patung district (*A. Henry*, 2536, 4902, 7339 !). Herb. Kew.

The ripe achenes of this species differ considerably from the nearly ripe ones that we have seen of *M. cymosa*, Prain; but in inflorescence and floral characters the two species are very similar, especially in the stamens and the two peculiar thickened lobes or processes on the edge of the galea.

LOXOCALYX, *Hemsl.*

(Genus novum Stachydearum.)

Calyx tubulosus, intus glaber, 8-nervis (id est nervis 2 posterioribus intermediis deficientibus), nervis 3 anticis intermedius primum obscuris, transversim paucinervosus, valde inæqualiter bilabiatus, fructifer parum auctus, sed majus prominenter nervosus, labio postico suberecto tridentato, labio antico valde elongato patente vel leviter recurvo bidentato, dentibus omnibus aculeato-acuminatis. *Corollæ* tota puberulæ tubus exsertus, intus prope basin piloso-annulatus; limbus bilabiatus, labio postico erecto galeato stamina incluso, labio antico patente fere æqualiter trilobato lobis rotundatis. *Stamina* 4, fere æquilonga, filamentis dilatatis puberulis; antheræ per paria approximatæ, loculis demum

Chas. Fitch del. et lith.

J.N. Fitch imp.

LOXOCALYX URTICIFOLIUS, *Hemsl.*

divaricatis. *Discus* æqualis, carnosus, stipitatus, fructifer longe stipitatus. *Stylus* bifidus, e galea breviter exsertus. *Nuculæ* supra discum longe stipitatum impositæ, amplæ, trigonæ, apice truncatæ et puberulæ, gynophoro breviores.—Herba erecta, ramosa, urticifolia, verticillastris dense paucifloris axillaribus, bracteis minutis aculeiformibus.

The remarkably elongated lower or anterior lip of the calyx and a gynophore as long or longer than the ripe nutlets are the chief distinguishing characters of this genus. In the fruiting-stage the dry rigid calyx is distinctly 8-nerved; five of the nerves being very prominent and terminating in the prickly teeth, with three intermediate, much slenderer nerves terminating in the three anterior notches. These three nerves are very obscure in the flowering-stage. *Loxocalyx* we place provisionally near *Otostegia* and *Roylea*.

6408 1. **Loxocalyx urticifolius,** *Hemsl.*, n. sp. (Plate V.)

Herba perennis?, glabrescens, 3–4-pedalis, caulibus crassis tetragonis cavis ramosis, ramulis floriferis graciliusculis simul subnitidis parce puberulis. *Folia* longe graciliterque petiolata, permembranacea, late cordato-ovata, ovata, vel in ramulis floriferis lanceolata, absque petiolo interdum fere æquilongo usque ad 5 poll. longa, sæpissime longe acuminata (id est dente terminali cæteris longiore), basi cuneata rotundata truncata vel cordata, grossissime serrato-dentata, utrinque primum minutissime parcissimeque strigillosa, venis primariis secundariisque paucis sat conspicuis inter se laxe anastomosantibus. *Flores* rosei vel atrorosei (teste *Henry*), puberuli, 7–9 lineas longi, brevissime pedicellati, interdum solitarii sed sæpius in quaque axilla 3–6 aggregati, bracteis minutis aculeiformibus suffulti.

HUPEH: Hsingshan and Fang at 7000 to 9000 ft. (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!). Herb. Kew.

HANCEA, *Hemsl.*

(Genus novum ex affinitate Gomphostemmatis.)

Calyx subcampanulatus, obscure 10-nervius, 5-fidus, lobo postico multo latiore, omnibus latis subite caudato-acuminatis. *Corollæ* tubus arcuatus, longe exsertus, e basi angusto sursum in faucem latam gradatim ampliatus intus exannulatus; corollæ limbus oblique bilabiatus, labio postico breviter rotundato-bilobato, labio antico trilobato, lobo intermedio longiore. *Stamina* 4, fere æquilonga, supra medium tubi affixa, inclusa, filamentis dilatatis tota puberulis, antheris bilocularibus loculis divaricatis demum confluentibus. *Discus* crassus antice in glandulam amplam ovarium excedens tumens. *Stylus* bifidus, stamina æquans. *Nuculæ* ignotæ.—Herba perennis foliis elongatis dentatis, floribus majusculis, verticillastris paucifloris in racemos axillares elongatos parvibracteatis dispositi.

7147 1. **Hancea sinensis,** *Hemsl.*, n. sp. (Plate VI.)

Caules erecti, simplici, tetragoni, puberuli, 2–3 ped. alti. *Folia* breviter petiolata, permembranacea, lanceolata vel oblanceolata, maxima fere pedalia, acuminata et deorsum longe attenuata, grosse serrato-dentata, parcissime hispidulo-puberula vel glabra, conspicue venosa. *Flores* 1–1½ poll. longi, longe graciliterque laxe racemosi, graciliter pedicellati, bracteis linearibus minutis.

SZECHUEN: mount Omei at 4000 ft. (*Faber*!). Herb. Kew.

In habit, foliage, and axillary racemose inflorescence, *Hancea* strongly resembles the Japanese genus *Keiskea*, belonging to the Satureineæ, whilst in floral characters it approaches very nearly to *Gomphostemma*; and it may be provisionally placed in the Prasieæ. The material is insufficient for determining its exact position.

The Euphorbiaceous genus *Hancea*, founded by Seemann, having been reduced to *Mallotus*, we have much pleasure in dedicating this singular plant to the memory of the late Dr. Hance, on whose labours in Chinese botany it is unnecessary to enlarge here.

1. **Amethystea cærulea,** *Linn. Sp. Pl.* ed. 1, p. 21; *Benth. in DC. Prodr.* xii. p. 572; *Ledeb. Fl. Ross.* iii. p. 441; *Maxim. Prim. Fl. Amur.* pp. 221 et 476; *Franchet, Pl. David.* p. 245; *Bot. Mag.* t. 2448.

CHIHLI: Jehol (*David*!); SHINGKING: Moukden (*Webster*!), Kaichow and Kiuchow (*Ross*!); HUPEH: Nanto and mountains to the northward (*A. Henry*!). Mus. Brit.; Herb. Kew.

Western Siberia to Mandshuria.

7067 1. **Leucosceptrum sinense,** *Hemsl.*, n. sp.

Affinis *L. cano*, a quo bene differt foliis oblongo-lanceolatis multo minoribus glabris vel cito glabrescentibus.

Chas. Fitch del. et lith.

HANCEA SINENSIS, *Hemsl.*

Frutex circiter 5-pedalis (*A. Henry* !), ramulis foliisque primum albo-puberulo-tomentosis cito glabrescentibus. *Folia* brevissime petiolata, papyracea, anguste oblongo-lanceolata, 1½–4 poll. longa, acutiuscula, minute serrata, subtus pallidiora. *Spicæ* distincte pedunculatæ, 2–4 poll. longæ. *Nuculæ* glabræ, clavato-triquetræ.

HUPEH: Changyang, on cliffs (*A. Henry* !). Herb. Kew.

The specimens are past the flowering-stage, yet the nutlets have not attained maturity; but by the foliage alone they are readily distinguished from the Indian *L. canum*, Smith. At the same time one could imagine its being an extreme form of that species.

5613 1. **Teucrium (§ Pleurobotrys *) albo-rubrum,** *Hemsl.*, n. sp.

Herba perennis, erecta, a basi ramosa, 1–3 ped. alta, tota molliter pubescens, caulibus graciliusculis rigidis obscure quadrangularibus, ramulis gracillimis, internodiis folia sæpius subæquantibus. *Folia* breviter petiolata, crassiuscula, papyracea, anguste lanceolata, 1–2-pollicaria, longe acuteque acuminata, basi cuneata vel interdum rotundata, utrinque pauci- (sæpius 5) grosse serrato-dentata, molliter pubescentia vel villosula. *Flores* albo-rubri (*Henry*), cum staminibus longe exsertis circiter pollicares, pilosuli, distincte graciliterque pedicellati, gemināti, in racemos laxos axillares et terminales patentes 2–3-pollicares dispositi, bracteis minutissimis, pedicellis pilosulis; calyx ruber (*Henry*), fructifer glabrescens, rigidus, nervosus, brevis, latus, dente postico quam 2 anticos breviore late rotundato, dentibus 2 lateralibus brevissimis deltoideis, dentibus 2 anticis elongatis acuminatis leviter incurvis; corolla alba (*Henry*), lobis 2 posticis erectis brevibus rotundatis, 2 intermediis anguste oblongis, lobo antico maximo ovali-rotundato sinuato; stamina longissime exserta, filamentis capillaribus glabris, antherarum loculis confluentibus; stylus stamina superans. *Nuculæ* minutæ, sphæroideæ, glabræ, obscurissime laxe reticulatæ, areola ampla rotundata.

HUPEH: Ichang and immediate neighbourhood, and Nanto and mountains to the northward (*A. Henry*, 2919, 4257, 4600 !); SZECHUEN: South Wushan (*A. Henry*, 7227 !). Herb. Kew.

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* PLEUROBOTRYS, sectio nova, *Hemsl.*

Herbæ sinenses, perennes, multicaules, foliis lanceolatis acuminatis, floribus speciosis vel parvis geminatis in racemos laterales vel terminales laxos dispositis, calycis dente vel labio superiore breviore late rotundato.

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2. **Teucrium (§ Pleurobotrys) bidentatum,** *Hemsl.*, n. sp.

Herba perennis, ramosa, 2–3 et probabiliter usque ad 4 ped. alta, obscure puberula, caulibus tetragonis rectis rigidis pæne lignosis viridibus, ramulis lateralibus sæpe subhorizontalibus. *Folia* breviter petiolata, tenuia sed vix membranacea, lanceolata, maxima usque ad 5 poll. longa, sed sæpius circiter 2 poll. longa, longe acuteque acuminata, basi cuneata, utrinque præsertim supra medium pauci grossiuscule serrato-dentata vel crenato-serrata, præter costam venasque primarias obscure puberulas glabra, subtus pallidiora, minute papillosa. *Flores* albi (fide *Henry*), parvi, absque staminibus exsertis circiter semipollicares, distincte pedicellati, racemis quam folia saltem dimidio brevioribus interdum ramulos axillares breves terminalibus, bracteis anguste lanceolatis pedicellos æquantibus vel superantibus; calyx fructifer glabrescens, siccus, nervosus, fauce tubi annulum ciliarum instructa, labio postico rotundato trilobato, lobo intermedio multo majore reflexo, labio antico parum longiore leviter incurvo acute bidentato; corollæ puberulæ tubo recto brevissime exserto, labium æquante, labii lobo terminali naviculiformi; stamina longe exserta, filamentis filiformibus leviter puberulis. *Nuculæ* minutæ, subsphæroideæ, obscure reticulatæ, apice pulverulentæ.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3119, 4150!); SZECHUEN: mount Omei at 3000 to 4000 ft. (*Faber*!). Herb. Kew.

[*Teucrium inflatum*, Swartz (Benth. Fl. Hongk. p. 279), a common tropical American and Polynesian species, was collected by Hance in waste places in Hongkong.]

3. **Teucrium japonicum,** *Willd. Sp. Pl.* iii. p. 23; *Benth. in DC. Prodr.* xii. p. 581; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 113; *Franch. et Savat. Enum. Pl. Jap.* i. p. 381; *Maxim. in Mél. Biol.* ix. p. 824, et xi. p. 808.

Teucrium virginicum, *Thunb. Fl. Jap.* p. 244, non *Linn.*

KIANGSU: Shanghai (ex *Maximowicz*); HUPEH: Patung, Nanto, Fang, and Tunghu (*A. Henry*!). Herb. Kew.

Japan.

There are some Chinese specimens of *Teucrium* which seem to connect this and *T. stoloniferum*, Benth.; yet Bentham placed them in different sections, and both Maximowicz and Franchet retain them as distinct.

4. **Teucrium (§ Pleurobotrys) ningpoense,** *Hemsl.*, n. sp.

Herba perennis *T. bidentato* simillima et fortasse hujus speciei varietas caulibus foliisque pubescentibus bracteis latioribus conspicuis, calycis labio antico bilobato.

CHEKIANG: Ningpo (*Faber!*). Herb. Kew.

This, *T. Pernyi*, Franch., and *T. bidentatum*, Hemsl., are evidently very closely allied, yet without connecting links they can hardly be regarded as varieties of one species. This differs conspicuously from *T. bidentatum* in having large bracts and in the anterior lip of the calyx being much more deeply bifid. From *T. Pernyi,* which we have not seen, it appears to differ in having much shorter racemes and in the front lobe of the corolla not being densely pubescent beneath. In foliage and inflorescence the species of this section resemble the genus *Keiskea*, Miq.

5. **Teucrium (§ Pleurobotrys) ornatum,** *Hemsl.*, n. sp.

Herba perennis, erecta, multicaulis, fere undique glabra, caulibus gracilibus simplicibus quadrangularibus 2–3-pedalibus. *Folia* distincte petiolata, permembranacea, glabra, patentissima, anguste lanceolata, 3–6 poll. longa, longissime acuminata, acutissima, basi sæpius cuneata, præter basin distanter serrata, supra subnitida, subtus sæpe purpurascentia, venis primariis lateralibus utrinque circiter 4 inter se anastomosantibus. *Flores* rosei (teste *Henry*), cum staminibus longe exsertis circiter pollicares, geminati, distincte pedicellati, laxe racemosi, racemis gracillimis pedicellisque obscure puberulis quam folia sæpius dimidio brevioribus sæpissime foliis 2 parvis basi instructis, bracteis minutis citissimo deciduis; calyx fructifer bilabiatus, late apertus, siccus, nervosus, labio postico rotundato-trilobato lobo intermedio multoties majore recurvo, labio antico acute bidentato; corolla obscurissime puberula, tubo recto calycem duplo superans, lobis 2 posticis erectis deltoideis, lobis lateralibus oblongis, lobo antico elongato tubum fere æquante lingueformi obtuse acuminato; stamina longissime exserta, erecta, filamentis capillaribus infra medium parce pilosulis. *Nuculæ* minutæ, sphæroideæ, obscure reticulatæ, simul pulverulentæ.

HUPEH: Hsingshan, Fang, South Patung, and Tunghu (*A. Henry!*). Herb. Kew.

6. **Teucrium palmatum,** *Benth. in Hook. f. Fl. Brit. Ind.* iv. p. 702.

HUPEH: Fang at 8000 ft. (*A. Henry!*). Herb. Kew.

Previously only known from Lachen in Sikkim.

7. **Teucrium Pernyi,** *Franchet, Pl. David.* p. 245.

KIANGSI: Kiukiang (*David* ex *Franchet*); KWEICHAU (*Perny* ex *Franchet*). Herb. Kew.

This belongs to our proposed new section *Pleurobotrys* (see *antè*, p. 311), and is evidently very closely allied to *T. ningpoense*, Hemsl..

8. **Teucrium quadrifarium,** *Hamilt. in Don's Prodr. Fl. Nep.* p. 108; *Benth. in DC. Prodr.* xii. p. 583, et *Fl. Hongk.* p. 280; *Hook. f. Fl. Brit. Ind.* iv. p. 701; *Maxim. in Mél. Biol.* ix. p. 827.

Teucrium Fortunei, *Benth. in DC. Prodr.* xii. p. 583.

Teucrium fulvum, *Hance in Walp. Ann.* iii. p. 270.

CHINA: without locality (*Fortune*, 71!); HUPEH: Patung district and Chienshih (*A. Henry*!); HONGKONG (*Wilford*! *Hance*! *Champion*!); HAINAN (*A. Henry*!). Mus. Brit.; Herb. Kew.

North India, from Kashmir eastward, and Burma.

There are specimens from the Corean Archipelago (*Oldham*, 604) which are intermediate between this and the next.

9. **Teucrium stoloniferum,** *Roxb. Fl. Ind.* iii. p. 3; *Benth. in DC. Prodr.* xii. p. 583; *Benth. Fl. Hongk.* p. 279; *Hook. f. Fl. Brit. Ind.* iv. p. 700; *Maxim. in Mél. Biol.* ix. p. 825; *Henriques in Bol. Soc. Brot.* iii. p. 144.

CHINA: without locality (*Millett*!); KIANGSU: Shanghai (*Faber*!); CHEKIANG: Ningpo (*Faber*!), Chusan (*Cantor*!); FORMOSA (*Oldham*, 360!); HUPEH: Ichang and Patung districts (*A. Henry*!); SZECHUEN (*Faber*!); KWANGTUNG: Lofaushan (*Ford*!); HONGKONG (*Hance*!); HAINAN (*A. Henry*!). Mus. Brit.; Herb. Kew.

North and East India, Burma, Java, and Japan.

1. **Ajuga bracteosa,** *Wall.* ex *Benth. in Wall. Pl. As. Rar.* i. p. 59, et *in DC. Prodr.* xii. p. 598; *Hook. f. Fl. Brit. Ind.* iv. p. 702; *Maxim. in Mél. Biol.* xii. p. 922.

YAYAMA ARCHIPELAGO, near Formosa (*Tashiro* ex *Maximowicz*).

Afghanistan, North India, and Abyssinia.

2. **Ajuga ciliata,** *Bunge, Enum. Pl. Chin. Bor.* p. 51; *Benth. in DC. Prodr.* xii. p. 596; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 465; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476, et *in Mél. Biol.* xi. p. 814.

Chihli: near Peking (*Bunge*! *Bushell*!); Hupeh: Changlo (*A. Henry*!). Mus. Brit.; Herb. Kew.

Japan.

5635 Var. **glabrescens**, *Hemsl.*; elata usque ad 2 ped. alta, fere omnino glabra, floribus albis.

Hupeh: Kuei and Chienshih (*A. Henry*!). Herb. Kew.

3. **Ajuga decumbens,** *Thunb. Fl. Jap.* p. 243; *Benth. in DC. Prodr.* xii. p. 598; *Franch. et Savat. Enum. Pl. Jap.* i. p. 382, et ii. p. 466; *Maxim. in Mél. Biol.* xi. p. 820.

Ajuga remota, *A. Gray in Perry's Jap. Exped.* ii. p. 316.

Kiangsu: Shanghai (*Carles*!); Fokien: Amoy (*Hance*!); Hupeh: Ichang, Nanto and mountains to the northward (*A. Henry*!); Kwangtung (*Hance*!); Corean Archipelago: Port Hamilton (*Oldham*, 600!); Luchu Archipelago (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

4. **Ajuga genevensis,** *Linn. Sp. Pl.* ed. 1, p. 561; *Benth. in DC. Prodr.* xii. p. 596; *Maxim. in Mél. Biol.* xi. p. 815; *Franchet, Pl. David.* p. 245, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 244.

Ajuga remota, *Benth. in DC. Prodr.* xii. p. 597, quoad platam japonicam, fide *Maxim.*

Ajuga multiflora, *Bunge, Enum. Pl. Chin. Bor.* p. 51.

Chihli and Shingking to Hupeh and Kwangtung (*Bunge*! *Ross*! *Hance*! *Fortune*! *A. Henry*! and other collectors). Mus. Brit.; Herb. Kew.

Europe and Asia Minor through Central Asia to Mandshuria and Japan.

Without close examination it is impossible to determine whether some specimens of an intermediate character belong to this species or to *A. decumbens*, Thunb., and authors appear to take very different views of the limits of these two species and *A. bracteosa*, Wall.

5. **Ajuga lupulina,** *Maxim. in Mél. Biol.* ix. p. 831, et xi. p. 811, t. 3. ff. 10–15; *Hance in Journ. Bot.* 1878, p. 111.

Chihli: mountains near Peking (*Moellendorff*! *Hancock*!); Kansuh: western mountains at 9500 to 11,500 feet above the sea (*Przewalski* ex *Maxmowicz*). Herb. Kew.

106. PLANTAGINEÆ.

1. **Plantago depressa,** *Willd. Enum. Pl. Hort. Berol., Suppl.* p. 8; *Decne. in DC. Prodr.* xiii. 1, p. 699; *Franchet, Pl. David.* p. 246.

CHIHLI: Peking and Jehol (*David* ex *Franchet*).

Siberia and Mongolia.

2. **Plantago lanceolata,** *Linn. Sp. Pl.* ed. 1, p. 113; *Decne. in DC. Prodr.* xiii. 1, p. 714; *Hook. f. Fl. Brit. Ind.* iv. p. 706; *Franch. et Savat. Enum. Pl. Jap.* i. p. 385.

KIANGSU: Shanghai, very rare (*Faber*!). Herb. Kew.

This very widely-dispersed plant is apparently introduced in China, as it is also said by Franchet and Savatier to be in Japan.

3. **Plantago major,** *Linn. Sp. Pl.* ed. 1, p. 12; *Decne. in DC. Prodr.* xiii. 1, p. 694; *Hook. f. Fl. Brit. Ind.* iv. p. 705; *Franchet, Pl. David.* p. 246, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 244; *Debeaux, Fl. Shangh.* p. 50, et *Fl. Tients.* p. 36; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476.

Plantago asiatica, *Linn. Sp. Pl.* ed. 1, p. 113; *Franch. et Savat. Enum. Pl. Jap.* i. p. 384.

Plantago Loureiri, *Roem. et Schult. Syst. Veg.* ii. p. 112; *DC. Prodr.* xiii. 1. p. 701.

Plantago exaltata, *Hornem.*; *Bunge, Enum. Pl. Chin. Bor.* p. 56.

CHIHLI and SHINGKING to HUPEH and FORMOSA, apparently common. Mus. Brit.; Herb. Kew.

Widely spread in temperate and warm regions; but introduced in America, except perhaps in the extreme north, and in the southern hemisphere.

4. **Plantago media,** *Linn. Sp. Pl.* ed. 1, p. 113; *Decne. in DC. Prodr.* xiii. 1, p. 697; *Debeaux, Fl. Tchef.* p. 117.

SHANTUNG: Chefoo (ex *Debeaux*); SHENSI (*Piasezki* ex *Maximowicz*).

Europe and North Africa to Siberia and Kamtschatka. This is also colonized in some countries, though to nothing like the extent that *P. lanceolata* and *P. major* are.

RULES FOR BORROWING BOOKS FROM THE LIBRARY.

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The GENERAL INDEX to the first twenty volumes of the Journal (BOTANY) and the Botanical portions of the Proceedings from November 1838 to June 1886 is now ready for delivery to the Fellows on Application.

It may be had in cloth, or in sheets for binding. Fellows are desired, when applying for copies, to state in which form they desire to receive it.

NOTICE.

◆

This Part forms the third portion of Vol. XXVI., and is in continuation of Messrs. Forbes and Hemsley's "Index Floræ Sinensis." Vol. XXVII. is in course of simultaneous issue.

The parts of these volumes already published are as follows:—

Vol. XXVI., Nos. 173–175. (Nos. 176–180 are reserved for the continuation of this work.)

Vol. XXVII., Nos. 181–184.

Attention to this Announcement is specially requested, to prevent application for unpublished parts.

The Library will be closed during the entire month of August, for the usual cleaning and revision of books.

The announcement of the dates of the Meetings of the ensuing Session will be sent to the Fellows in October.

JULY 30. Price 3s.

THE JOURNAL

OF

THE LINNEAN SOCIETY.

VOL. XXVI. BOTANY. No. 176.

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NOTE.—The Charter and Bye-Laws of the Society, as amended to the 19th March, 1891, may be had on application.

107. NYCTAGINEÆ *.

1. **Boerhaavia repens,** *Linn. Sp. Pl.* ed. 1, p. 3; *Choisy in DC. Prodr.* xiii. 2, p. 453; *Boiss. Fl. Or.* iv. p. 1045; *Hook. f. Fl. Brit. Ind.* iv. p. 709; *Hance in Journ. Bot.* 1880, p. 301.

Boerhaavia diffusa, *Linn. Sp. Pl.* ed. 1, p. 3; *Choisy in DC. Prodr.* xiii. 2, p. 452; *Hance in Journ. Bot.* 1880, p. 301.

Fokien: Amoy (*Hance*, 1434, 1425!); Pratas Island (*Wilford*!); Formosa: various localities (*Wilford*! *Playfair*!); Yunnan (*Anderson*!); Kwangtung: Pakhoi (*Playfair*!); Hongkong (*Wright*!); Hainan (*A. Henry*!); Luchu Archipelago (*Wright*!). Mus. Brit.; Herb. Kew.

Tropical and subtropical regions of Asia, Africa, America, and Australia.

Both the typical *repens*, Linn., and the variety *diffusa* occur in China.

2. **Boerhaavia repanda,** *Willd. Sp. Pl.* i. p. 22; *Choisy in DC. Prodr.* xiii. 2, p. 455; *Hook. f. Fl. Brit. Ind.* iv. p. 709.

Valeriana chinensis, *Linn. Sp. Pl.* ed. 1, p. 33; *Burm. Fl. Ind.* p. 15, t. 6. f. 3.

China (ex *Choisy*).

Widely spread in India and Malaya, and extending to Australia.

1. **Pisonia aculeata,** *Linn. Sp. Pl.* ed. 1, p. 1026; *Choisy in DC. Prodr.* xiii. 2, p. 440; *Hook. f. Fl. Brit. Ind.* iv. p. 711; *Wight, Ic. Pl. Ind. Or.* t. 1763–4.

Formosa: various localities (*A. Hance*! *Playfair*!); Hainan (*A. Henry*!). Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, America, and Australia.

[The American *Mirabilis Jalapa*, Linn., is widely colonized in China.]

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* Since the publication of the preceding parts of the 'Index Floræ Sinensis' the Trustees of the British Museum have purchased a set of Dr. A. Henry's Chinese plants, so that they will be found there as well as at Kew and several other large botanical establishments; but we have not been able to record here which of the species are in the British Museum, though we know that nearly all of them are.

108. AMARANTACEÆ.

1. **Deeringia celosioides,** *R. Br. Prodr. Fl. Nov. Holl.* p. 413; *Hance in Journ. Bot.* 1878, p. 232; *Hook. f. Fl. Brit. Ind.* iv. p. 714; *Wight, Ic. Pl. Ind. Or.* t. 728; *Bot. Mag.* t. 2717.

Deeringia baccata, *Moq. in DC. Prodr.* xiii. 2, p. 236.

FORMOSA: Taiwan (*Playfair* !); HAINAN: Hoihow (*Fagg*, hb. *Hance*, 10066 !). Mus. Brit.; Herb. Kew.

India, Malaya, and Australia.

1. **Celosia argentea,** *Linn. Sp. Pl.* ed. 1, p. 205; *Moq. in DC. Prodr.* xiii. 2, p. 242; *Benth. Fl. Hongk.* p. 284; *Miq. in Journ. de Bot. Néerl.* i. p. 98; *Debeaux, Fl. Tchef.* p. 119; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 245.

Celosia margaritacea, *Linn. Sp. Pl.* ed. 2, p. 297; *Miq. in Journ. de Bot. Néerl.* i. p. 98.

SOUTH and CENTRAL CHINA, FORMOSA, HAINAN, and LUCHU ARCHIPELAGO: apparently common (*Fortune*! *Millett*! *Oldham*! *Wright*! *Staunton*! *A. Henry*! *Bourne*! *Vachell*! and others). Mus. Brit.; Herb. Kew.

Now widely spread in tropical and subtropical countries, but it is uncertain where it is truly indigenous.

The Cockscomb, *Celosia cristata*, Linn., syn. *C. castrensis*, Linn., usually regarded as a variety of *C. argentea*, Linn., occurs in a half wild state in China.

2. **Celosia Swinhoëi,** *Hemsl.*, n. sp.

Herba undique glabra, stricte ramosa, ramulis floriferis gracillimis. *Folia* crassa, lineari-lanceolata, maxima visa vix pollicaria, utrinque attenuata, integra, venis immersis obsoletis. *Flores*, ut videtur, albi, pro genere laxiuscule spicato-racemosi, racemis 2–4-pollicaribus, pedicellis quam flores brevioribus, bracteis bracteolisque scariosis acutis flores vix æquantibus; perianthii scariosi, segmenta late ovalia, obtusa, concava; stamina inclusa; ovarium breviter stipitatum, glabrum, sæpe 5-ovulatum, stylo elongato demum exserto, ovulis longe funiculatis. *Utriculus* non visus.

HAINAN: without locality (*Swinhoe* !). Herb. Kew.

Easily distinguished by its very slender branchlets and small narrow leaves.

1. **Amarantus Blitum,** *Linn. Sp. Pl.* ed. 1, p. 990; *Moq. in DC. Prodr.* xiii. 2, p. 263; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Hook. f. Fl. Brit. Ind.* iv. p. 721.

Amarantus sylvestris, *Desf. Cat. Hort. Par.* 1804, p. 44.

Amarantus Blitum α. sylvestris, *Moq. in DC. Prodr.* xiii. 2, p. 263; *Debeaux, Fl. Tients.* p. 37, et *Fl. Tchef.* p. 121; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 245.

Amarantus ascendens, *Hornem. Hort. Hafn. Suppl.* p. 107; *DC. Prodr.* xiii. 2, p. 264?

Amarantus oleraceus, *Linn. Sp. Pl.* ed. 2, p. 1403.

Euxolus oleraceus, *Moq. in DC. Prodr.* xiii. 2, p. 273.

NORTH and CENTRAL CHINA (*Webster*! *A. Henry*! *Wilford*! and others). Mus. Brit.; Herb. Kew.

A very widely spread weed of cultivation in warm countries.

2. **Amarantus caudatus,** *Linn. Sp. Pl.* ed. 1, p. 990; *Moq. in DC. Prodr.* xiii. 2, p. 255; *Debeaux, Fl. Tchef.* p. 120; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 246; *Hook. f. Fl. Brit. Ind.* iv. p. 719.

Amarantus alopecurus, *Hochst.* ex *Braun et Bouché, Ind. Sem. Hort. Berol.* 1872, App. p. 1.

SHINGKING, HUPEH, and SZECHUEN (*Webster*! *A. Henry*! *Mesny*!). Mus. Brit.; Herb. Kew.

Probably always cultivated. It is now more or less wild in various hot countries; but it may be a product of cultivation, and only an escape therefrom in a wild condition.

3. **Amarantus gangeticus,** *Linn. Sp. Pl.* ed. 2, p. 1403; *Moq. in DC. Prodr.* xiii. 2, p. 261; *Hook. f. Fl. Brit. Ind.* iv. p. 719.

Amarantus tristis, *Linn. Sp. Pl.* ed. 1, p. 989, et ed. 2, p. 1404; *Moq. in DC. Prodr.* xiii. 2, p. 260; *Lour. Fl. Cochinch.* p. 560.

Amarantus melancholicus, *Linn. Sp. Pl.* ed. 1, p. 989; *Moq. in DC. Prodr.* xiii. 2, p. 262.

Amarantus tricolor, *Linn. Sp Pl.* ed. 1, p. 989; *Lour. Fl. Cochinch.* p. 560.

Amarantus melancholicus, β. tricolor, *Moq. in DC. Prodr.* xiii. 2, p. 262.

CHINA: various localities from Peking southward, both cultivated and wild (*Bretschneider*! *Maingay*! *Ross*! *Bourne*! *A. Henry*! *Playfair*!). Mus. Brit.; Herb. Kew.

Widely spread in warm countries and commonly cultivated.

4. **Amarantus mangostanus,** *Linn. Amœn. Acad.* iv. p. 294; *Moq. in DC. Prodr.* xiii. 2, p. 261; *Hook. f. Fl. Brit. Ind.* iv. p. 720; *S. Moore in Journ. Bot.* 1875, p. 231.

KIANGSI: Kiukiang (*Shearer*!). Herb. Kew.

Throughout India and Ceylon, usually in cultivated ground.

5. **Amarantus paniculatus,** *Linn. Sp. Pl.* ed. 2, p. 1406; *Moq. in DC. Prodr.* xiii. 2, p. 257; *Hook. f. Fl. Brit. Ind.* iv. p. 718; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 246; *Debeaux, Fl. Tchef.* p. 120.

Amarantus cruentus, *Linn. Sp. Pl.* ed. 2, p. 1406; *Lour. Fl. Cochinch.* p. 561.

Amarantus sanguineus, *Linn. Sp. Pl.* ed. 2, p. 1407.

HUPEH: Ichang and Patung district, cultivated (*A. Henry*!). Mus. Brit.; Herb. Kew.

Commonly cultivated and widely spread in tropical Asia and Africa.

6. **Amarantus polygamus,** *Linn. Amœn. Acad.* iv. p. 294; *Lour. Fl. Cochinch.* p. 560; *Hook. f. Fl. Brit. Ind.* iv. p. 721.

CHINA: cultivated and wild (ex *Loureiro*).

Very widely spread in hot countries.

7. **Amarantus retroflexus,** *Linn. Sp. Pl.* ed. 1, p. 991; *Moq. in DC. Prodr.* xiii. 2, p. 258; *Ledeb. Fl. Ross.* iii. p. 856; *Hance in Journ. Bot.* 1879, p. 14; *Franchet, Pl. David.* p. 247, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 246.

CHIHLI and SHANTUNG (ex *Hance* et *Franchet*).

Europe and North Africa to Asia Minor and Siberia, and in North and Central America.

8. **Amarantus spinosus,** *Linn. Sp. Pl.* ed. 1, p. 991; *Moq. in DC. Prodr.* xiii. 2, p. 260; *Benth. Fl. Hongk.* p. 284; *Debeaux, Fl. Tchef.* p. 121, et *Fl. Shangh.* p. 50; *Hook. f. Fl. Brit. Ind.* iv. p. 718; *Henriques in Bol. Soc. Brot.* iii. p. 143.

FORMOSA: Tamsui and Takow (*Oldham,* 417! *Playfair*!); HUPEH: Patung district (*A. Henry*!); KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Wilford*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Widely spread in warm countries.

9. **Amarantus viridis,** *Linn. Sp. Pl.* ed. 2, p. 1405; *Benth. Fl. Hongk.* p. 284; *Hook f. Fl. Brit. Ind.* iv. p. 720.

Euxolus viridis, *Moq. in DC. Prodr.* xiii. 2, p. 273; *Debeaux, Fl. Shangh.* p. 50; *Franch. et Savat. Enum. Pl. Jap.* i. p. 391.

FORMOSA: Tamsui and Taiwan (*Oldham*, 418! *Playfair*!); KWANGTUNG (*Wenyon*!); HONGKONG (*Hinds*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

In nearly all warm countries.

1. **Cyathula prostrata,** *Blume, Bijdr.* p. 549; *Moq. in DC. Prodr.* xiii. 2, p. 326; *Benth. Fl. Hongk.* p. 285; *Hook. f. Fl. Brit. Ind.* iv. p. 723.

Desmochæta prostrata, *DC. Cat. Hort. Monsp.* 1813, p. 102; *Wight, Ic. Pl. Ind. Or.* t. 733.

FORMOSA: Takow (*Playfair*); KWANGTUNG (*Tate*!); HONGKONG (*Wright*! *Wilford*!); HAINAN (*A. Henry*!). Mus. Brit.; Herb. Kew.

Dispersed throughout the tropics.

1. **Allmania nodiflora,** *R. Br. in Wall. Cat.* 6890, excl. B, ex *Hook. f. Fl. Brit. Ind.* iv. p. 716.

Chamissoa dichotoma, *Moq. in DC. Prodr.* xiii. 2, p. 248; *Wight, Ic. Pl. Ind. Or.* t. 1771.

Chamissoa nodiflora, *Mart. Beitr. Amarant.* p. 79; *Wight, Ic. Pl. Ind. Or.* t. 1770.

KWANGTUNG: Pakhoi (*Playfair*). Herb. Kew.

North and South India, Ceylon, and Malaya.

1. **Ærua scandens,** *Wall. Cat.* 6911, excl. M, ex *Hook. f. Fl. Brit. Ind.* iv. p. 727; *Moq. in DC. Prodr.* xiii. 2, p. 302.

KWANGTUNG: near the village Sainam on the North river (*Sampson & Hance*, 13772!). Mus. Brit.; Herb. Kew.

India and Malaya to the Philippine Islands and in West tropical Africa.

1. **Achyranthes aspera,** *Linn. Sp. Pl.* ed. 1, p. 204; *Moq. in DC. Prodr.* xiii. 2, p. 314; *Hook. f. Fl. Brit. Ind.* iv. p. 730; *Benth. Fl. Hongk.* p. 285; *Wight, Ic. Pl. Ind. Or.* t. 1780; *Miq. in Journ. de Bot. Néerl.* i. p. 98; *Watt, Dict. Econom. Prod. Ind.* i. p. 81.

KIANGSU: Shanghai (*Maingay*!); FORMOSA (*Oldham*, 416!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!); KWANGTUNG: Pakhoi and other localities (*Tate*! *Playfair*!); HONGKONG (*Hinds*! *Champion*!); KWANGSI (*Wenyon*!). Mus. Brit.; Herb. Kew.

Generally dispersed throughout the tropics.

It possesses medicinal properties, and is used by both native and European practitioners in India.

2. **Achyranthes bidentata,** *Blume, Bijdr.* p. 545; *Moq. in DC. Prodr.* xiii. 2, p. 312; *Hook. f. Fl. Brit. Ind.* iv. p. 730; *Wight, Ic. Pl. Ind. Or.* t. 1779; *Franch. et Savat. Enum. Pl. Jap.* i. p. 391.

CHEKIANG: Ningpo mountains (*Faber*!); KIANGSI: Kiukiang (*Shearer*!); YUNNAN (*Anderson*!); LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

India, Ceylon, Malaya, and Japan.

1. **Alternanthera nodiflora,** *R. Br. Prodr. Fl. Nov. Holl.* p. 417; *Moq. in DC. Prodr.* xiii. 2, p. 356; *Hook. f. Fl. Brit. Ind.* iv. p. 732.

Alternanthera denticulata, *R. Br. Prodr. Fl. Nov. Holl.* p. 417; *Walp. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 404.

FORMOSA: Tamsui (*Oldham*, 415 pro parte); KWANGTUNG: Cape Syngmoon (*Meyen* ex *Walpers*). Herb. Kew.

Tropical Asia and Africa, and extending to Australia and Japan.

2. **Alternanthera sessilis,** *R. Br. Prodr. Fl. Nov. Holl.* p. 417; *Moq. in DC. Prodr.* xiii. 2, p. 357 (incl. β. Stauntonii); *Benth. Fl. Hongk.* p. 286; *Hook. f. Fl. Brit. Ind.* iv. p. 286; *Miq. in Journ. de Bot. Néerl.* i. p. 98; *Engler, Bot. Jahrb.* vi. p. 56; *Wight, Ic. Pl. Ind. Or.* t. 727.

Gomphrena sessilis, *Linn. Sp. Pl.* ed. 1, p. 225.

Illecebrum sessile, *Linn. Sp. Pl.* ed. 2, p. 300; *Lour. Fl. Cochinch.* p. 162.

Telanthera polygonoides, *Seem. Bot. Voy. 'Herald,'* p. 407, non *Moq.*

CHINA: without locality (*Staunton*! *Millett*!); FORMOSA Tamsui (*Oldham*, 415 pro parte!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); KWANGTUNG: various localities (*Wenyon*! *Playfair*! *Hance*! *Ford*!); HAINAN (*Swinhoe*! *A. Henry*!). Mus. Brit.; Herb. Kew.

Generally spread in the warm regions of both hemispheres.

1. **Philoxerus Wrightii,** *Hook. f. in Benth. et Hook. f. Gen. Pl.* iii. p. 40 (nomen tantum); *Maxim. in Mél. Biol.* xii. p. 528, cum descriptione.

LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

Gomphrena globosa, Linn. (Bot. Mag. t. 2815), believed to be of American origin, is cultivated and more or less colonized in China as well as many other countries.]

109. CHENOPODIACEÆ.

1. **Acroglochin chenopodioides,** *Schrad. Cat. Hort. Goett.* 1824; *Hook. f. Fl. Brit. Ind.* v. p. 2.

Acroglochin persicarioides, *Moq. in DC. Prodr.* xiii. 2, p. 254; *Kurz in Journ. Bot.* 1873, p. 193.

HUPEH: Ichang, Patung, Nanto, and mountains to the northward (*A. Henry*!); SZECHUEN: North Wushan (*A. Henry*!); YUNNAN (*Anderson*!). Mus. Brit.; Herb. Kew.

North India, from Kashmir eastward to the Khasia mountains.

1. **Chenopodium acuminatum,** *Willd. in Neue Schrift. Gesellsch. Naturf. Berl.* ii. (1799) p. 124, t. 5. f. 2; *Moq. in DC. Prodr.* xiii. 2, p. 62 (varietates); *Benth. Fl. Hongk.* p. 282; *Ledeb. Fl. Ross.* iii. p. 694; *Franch. et Savat. Enum. Pl. Jap.* i. p. 386; *Franchet, Pl. David.* p. 247; *Engler, Jahrb.* vi. p. 56.

Chenopodium Vachellii, *Hook. et Arn. Bot. Beech. Voy.* p. 269.

Chenopodium ambrosioides, *Hance in Journ. Linn. Soc.* xiii. p. 86, non *Linn.*

CHINA: without locality (*Millett*!); CHIHLI: near Peking (*Bretschneider*! *Swinhoe*, hb. *Hance*, 2410!); SHINGKING: various localities (*Ross*! *Webster*!); FORMOSA (*Oldham*, 442!); KWANGTUNG: Macao (*Vachell*!), Pakhoi (*Playfair*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Western Siberia to Japan.

2. **Chenopodium album,** *Linn. Sp. Pl.* ed. 1, p. 219; *Moq. in DC. Prodr.* xiii. 2, p. 70; *Benth. Fl. Hongk.* p. 282; *Franchet, Pl. David.* p. 247, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 246 (var. rhombifolium); *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Hook. f. Fl. Brit. Ind.* v. p. 3.

CHIHLI and COREA to HUPEH and FORMOSA: apparently common. Mus. Brit.; Herb. Kew.

Now almost cosmopolitan in tropical and temperate regions.

3. **Chenopodium ambrosioides**, *Linn. Sp. Pl.* ed. 1, p. 219; *Moq. in DC. Prodr.* xiii. 2, p. 72; *Hook. f. Fl. Brit. Ind.* v. p. 4; *Franch. et Savat. Enum. Pl. Jap.* i. p. 387; *Wight, Ic. Pl. Ind. Or.* t. 1786.

FORMOSA: Tamsui (*Oldham*, 444!). Herb. Kew.

Widely spread in the Old World and colonized in America.

4. **Chenopodium aristatum**, *Linn. Sp. Pl.* ed. 2, p. 321.

Teloxys aristata, *Moq. in Ann. Sc. Nat.* 2^{me} série, i. p. 290, t. 10. f. A, et *in DC. Prodr.* xiii. 2, p. 59; *Ledeb. Fl. Ross.* iii. p. 693; *Franchet, Pl. David.* p. 247.

CHIHLI: Jehol (*David* ex *Franchet*).

Siberia and Mandshuria, and also recorded by Ledebour from "Russian America."

5. **Chenopodium Botrys**, *Linn. Sp. Pl.* ed. 1, p. 219; *Moq. in DC. Prodr.* xiii. 2, p. 75; *Hook. f. Fl. Brit. Ind.* v. p. 4; *Franchet, Pl. David.* p. 248.

CHIHLI: Jehol (*David* ex *Franchet*). Herb. Kew.

Europe, North Africa, Northern and Western Asia, and colonized in other countries.

A specimen at Kew from the Paris herbarium, collected by Father David, bearing this name, is *C. hybridum*, Linn.; but as both species are enumerated by Franchet in his 'Plantæ Davidianæ,' it is most likely that the labels were accidentally transposed.

6. **Chenopodium ficifolium**, *Smith, Fl. Brit.* i. p. 276; *Moq. in DC. Prodr.* xiii. 2, p. 65; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Franch. et Savat. Enum. Pl. Jap.* i. p. 386.

SHINGKING: Moukden (*Ross*!); FORMOSA: Takow (*Playfair*!). Herb. Kew.

Western Europe to Western Asia; perhaps introduced in China.

7. **Chenopodium glaucum**, *Linn. Sp. Pl.* ed. 1, p. 220; *Moq. in DC. Prodr.* xiii. 2, p. 72; *Hook. f. Fl. Brit. Ind.* v. p. 4; *Franchet, Pl. David.* p. 248, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 246; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 8.

CHIHLI: Jehol (*David* ex *Franchet*); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); KANSUH (ex *Kanitz*).

Now widely dispersed in both north and south temperate regions.

8. **Chenopodium hybridum,** *Linn. Sp. Pl.* ed. 1, p. 219; *DC. Prodr.* xiii. 2, p. 68; *Hook. f. Fl. Brit. Ind.* v. p. 3; *Franchet, Pl. David.* p. 248; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 8.

CHIHLI: near Peking (*Bretschneider*!), Jehol (*David*!); KANSUH (ex *Kanitz*). Mus. Brit.; Herb. Kew.

Europe, North Africa, and North Asia, and introduced in North America.

9. **Chenopodium urbicum,** *Linn. Sp. Pl.* ed. 1, p. 218; *Moq. in DC. Prodr.* xiii. 2, p. 69; *Ledeb. Fl. Ross.* iii. p. 701.

CHIHLI: near Peking (*Bretschneider*!). Herb. Kew.

Western Europe to Persia and Siberia.

[The Beetroot, *Beta vulgaris,* Linn., is much cultivated in the Peking district and in other parts of China, according to Bretschneider (Early Res. p. 169), and there are specimens in the Kew Herbarium from the most distant provinces. *Spinacia oleracea,* Linn., Spinach, is also generally cultivated.]

1. **Atriplex arenaria,** *Nutt. Gen. Am. Pl.* i. p. 198; *A. Gray, Man. Bot. N. U.S.* ed. 6, p. 434; *Hook. et Arn. Bot. Beech. Voy.* p. 157; *Maxim. in Mel. Biol.* xii. p. 530.

Obione arenaria, *Moq. in DC. Prodr.* xiii. 2, p. 107.

LUCHU ARCHIPELAGO: Miyako Island, near Formosa (*Tashiro* ex *Maximowicz*).

Eastern North America southward to Mexico.

2. **Atriplex littoralis,** *Linn. Sp. Pl.* ed. 1, p. 1054; *Moq. in DC. Prodr.* xiii. 2, p. 96; *Franch. et Savat. Enum. Pl. Jap.* i. p. 387; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Debeaux, Fl. Tchef.* p. 117; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 246.

CHIHLI: Peking (ex *Maximowicz*); SHANTUNG: Chefoo (ex *Franchet*).

Western Europe to Japan, and in North America.

3. **Atriplex nummularia,** *Lindl. in Mitch. Trop. Austral.* p. 64; *Moq. in DC. Prodr.* xiii. 2, p. 460; *Benth. Fl. Austral.* v. p. 170?

FORMOSA: Taiwan (*Wilford*, 537!); PESCADORE ISLANDS (*A. Hance*, hb. *Ford*!). Mus. Brit.; Herb. Kew.

A. nummularia, Lindl., is a common Australian species, having been collected in Queensland, New South Wales, Victoria, and South Australia, though apparently nowhere on the coast; yet these insular specimens are so exactly like the original plant described by Lindley that we should have had no hesitation in referring them to it had they come from the same country.

4. **Atriplex sibirica,** *Linn. Sp. Pl.* ed. 2, p. 1493; *Moq. in DC. Prodr.* xiii. 2, p. 107.

Obione muricata, *Gærtn. Fruct.* ii. p. 198, t. 126. f. 5; *Ledeb. Fl. Ross.* iii. p. 734.

KANSUH: north of the Hoangho (*Piasezki* ex *Maximowicz*).

Eastern Europe and Siberia.

1. **Eurotia ceratoides,** *C. A. Mey. in Ledeb. Fl. Alt.* iv. p. 239, et *Fl. Ross.* iii. p. 738; *Moq. in DC. Prodr.* xiii. 2, p. 120; *Hook. f. Fl. Brit. Ind.* v. p. 8; *Franchet, Pl. David.* p. 249.

CHIHLI: Peking (*David* ex *Franchet*).

Western Europe to North-west India, Mongolia, and Mandshuria, and in North-west America.

1. **Axyris amaranthoides,** *Linn. Sp. Pl.* ed. 1, p. 979; *Moq. in DC. Prodr.* xiii. 2, p. 116; *Hook. f. Fl. Brit. Ind.* v. p. 8; *Franchet, Pl. David.* p. 249.

CHIHLI: Jehol (*David*!); SHINGKING (*Ross*!). Herb. Kew.

North India and Turkestan to Mandshuria.

1. **Corispermum* hyssopifolium,** *Linn. Sp. Pl.* ed. 2, p. 4; *Moq. in DC. Prodr.* xiii. 2, p. 140; *Ledeb. Fl. Ross.* iii. p. 758; *Hook. f. Fl. Brit. Ind.* v. p. 9.

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* The limits of the proposed species of this genus are so ill-defined that we have not been able to determine satisfactorily the few Chinese specimens in herbaria.

SHANTUNG: Chefoo (*Forbes*!). Mus. Brit.; Herb. Kew.

South of Europe and Caucasus to North-west India and Mandshuria, and in North America.

Some of the Chinese specimens referred to other species may belong here, or the reverse; and the Chefoo specimen is as much like some referred to *C. orientale*, Lam.

2. **Corispermum Redowskii**, *Fisch. in Cat. Hort. Gorenk.* 1808, p. 25, ex *Ledeb. Fl. Ross.* iii. p. 764; *Franchet, Pl. David.* p. 251.

CHIHLI: Jehol (*David*!); SHANTUNG (*Maingay*!). Herb. Kew.

Siberia.

3. **Corispermum Stauntoni,** *Moq. Chenop. Enum.* p. 104, et *in DC. Prodr.* xiii. p. 140; *Debeaux, Fl. Tchef.* p. 118; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 247.

CHINA: without locality (*Staunton*!); SHINGKING: banks of the Liao (*Ross*!); SHANTUNG: Chefoo (ex *Debeaux*). Mus. Brit.; Herb. Kew.

4. **Corispermum tylocarpum,** *Hance in Journ. Bot.* 1868, p. 47.

CHIHLI: Peking (*Williams,* hb. *Hance,* 13489!). Mus. Brit.

Apparently not different from *C. hyssopifolium*, Linn.

1. **Agriophyllum arenarium,** *Bieberst. Fl. Taur. Cauc.* iii. p. 6; *Ledeb. Fl. Ross.* iii. p. 756; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 247.

Agriophyllum squarrosum, *Moq. in DC. Prodr.* xiii. 2, p. 139; *Debeaux, Fl. Tchef.* p. 117.

SHANTUNG: Chefoo (ex *Debeaux* et *Franchet*).

From Southern Russia and Persia through Central Asia to Mandshuria.

1. **Chenolea divaricata,** *Hook. f. Fl. Brit. Ind.* v. p. 10.

Echinopsilon divaricatum, *Kar. et Kir. in Bull. Soc. Nat. Mosc.* 1841, p. 736; *Moq. in DC. Prodr.* xiii. 2, p. 135; *Ledeb. Fl. Ross.* iii. p. 752; *Hance in Journ. Linn. Soc.* xiii. p. 86.

CHIHLI: Kalgan, close to the great wall (*Williams*, hb. *Hance*. 14682!). Mus. Brit.; Herb. Kew.

North-west India and Siberia.

1. **Kochia Scoparia,** *Schrad. Neues Journ.* 1809, p. 85; *Moq. in DC. Prodr.* xiii. 2, p. 130; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476, β. chinensis; *Turcz. Fl. Baical.-Dahur.* ii. p. 33; *Hook. f. Fl. Brit. Ind.* v. p. 11; *Franch. et Savat. Enum. Pl. Jap.* i. p. 388; *Franchet, Pl. David.* p. 249, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 246.

Chenopodium Scoparia, *Linn. Sp. Pl.* ed. 1, p. 221; *Thunb. Fl. Jap.* p. 113.

CHIHLI: near Peking (*Bretschneider*! *Bushell*!), cultivated and employed for making brooms (*Williams,* hb. *Hance,* 11450!), Jehol (*David*!); SHANTUNG: Chefoo (ex *Franchet*); KIANGSU: Shanghai (*Maingay*! *Faber*!). Mus. Brit.; Herb. Kew.

South-western Europe to North-west India and through Central Asia to Japan.

1. **Kalidium gracile,** *Fenzl, in Ledeb. Fl. Ross.* iii. p. 769 in nota.

KANSUH: north of Hoangho (*Piasezki* ex *Maximowicz* in litt.).

Mongolia.

1. **Arthrocnemum indicum,** *Moq. Chenop. Enum.* p. 113, et *in DC. Prodr.* xiii. 2, p. 151; *Hook. f. Fl. Brit. Ind.* v. p. 12.

Salicornia indica, *Willd. in Neue Schrift. Gesellsch. Naturf. Berl.* ii. 1799, p. 111, t. 4; *Hance in Journ. Bot.* 1878, p. 111.

HAINAN: sands of the sea-shore at Hoitow (*Fagg,* hb. *Hance,* 13024!). Mus. Brit.; Herb. Kew.

Tropical India and Africa.

1. **Suæda australis,** *Moq. in Ann. Sc. Nat.* 1re série, xxiii. p. 318; *Benth. Fl. Hongk.* p. 283, et *Fl. Austral.* v. p. 206 (*sub* S. maritima); *Hance in Journ. Linn. Soc.* xiii. p. 119.

Chenopodina australis, *Moq. in DC. Prodr.* xiii. 2, p. 163.

Suæda indica, *Seem. Bot. Voy. 'Herald,'* p. 406, nec *Moq.*

Chenopodium australe, *R. Br. Prodr. Fl. Nov. Holl.* p. 407.

HONGKONG (*Hance*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Australia and Polynesia.

2. **Suæda glauca,** *Bunge in Mél. Biol.* x. p. 293; *Franchet, Pl. David.* p. 251, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 248.

Schoberia glauca, *Bunge, Enum. Pl. Chin. Bor.* p. 56.

Chenopodina glauca, *Moq. in DC. Prodr.* xiii. 2, p. 162.

CHIHLI: near Peking (*Bunge*! *Bretschneider*! *Archer*!); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); COREAN ARCHIPELAGO: Bate group, on sandy seashore (*Oldham*, 677!). Mus. Brit.; Herb. Kew.

Mongolia and Mandshuria.

3. **Suæda linifolia,** *Pall. Illustr. Pl.* p. 47, t. 40.

Schanginia linifolia, *C. A. Mey. in Ledeb. Fl. Alt.* i. p. 395, et *Fl. Ross.* iii. p. 775; *Moq. in DC. Prodr.* xiii. 2, p. 153; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 467.

CHIHLI: Peking (ex *Maximowicz*).

South-eastern Europe and Siberia.

4. **Suæda maritima,** *Dumort. Fl. Belg.* (1827) p. 22; *Moq. in Ann. Sc. Nat.* 1re série, xxiii. p. 308; *Boiss. Fl. Orient.* iv. p. 941; *Hook. f. Fl. Brit. Ind.* v. p. 14; *Franch. in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 248.

Chenopodina maritima, *Moq. in DC. Prodr.* xiii. 2, p. 161; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Debeaux, Fl. Tients.* p. 37; *id. Fl. Tchef.* p. 118.

This is recorded from several localities in China, and there is one small specimen in the Kew Herbarium, communicated from St. Petersburg, and recorded from China, without special locality, which may be this species; but Franchet suggests (*loc. sup. cit.*) that the specimens referred here by Debeaux may be *S. glauca*, Bunge.

Suæda maritima, Dumort., is dispersed all round the northern hemisphere.

5. **Suæda monoica,** *Forsk. Fl. Ægypt. Arab.* p. 70; *Moq. in DC. Prodr.* xiii. 2, p. 156; *Hook. f. Fl. Brit. Ind.* v. p. 13; *Wight, Ic. Pl. Ind. Or.* t. 1792?

KWANGTUNG: Lantao Island (*Ford*!), Pakhoi (*Playfair*!). Herb. Kew.

Tropical Africa, Arabia, South India, and Ceylon.

The species of this genus—indeed, we might say, of this order—are difficult to discriminate without very close examination, and we leave several of them uncertain.

6. **Suæda nudiflora,** *Moq. in Ann. Sc. Nat.* 1re série, xxiii. p. 316, et *in DC. Prodr.* xiii. 2, p. 155; *Hook. f. Fl. Brit. Ind.* v. p. 14?

FORMOSA: Taiwan (*Playfair*!). Herb. Kew.

Bengal, South India, and Ceylon.

7. **Suæda Salsa,** *Pall. Illustr. Pl.* p. 46, t. 39; *Ledeb. Fl. Ross.* iii. p. 785; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 248.

Chenopodina Salsa, *Moq. in DC. Prodr.* xiii. 2, p. 160.

SHANTUNG: Chefoo (*Fauvel* ex *Franchet*).

South-eastern Europe, and Asia Minor to Eastern Siberia.

1. **Salsola collina,** *Pall. Illustr. Pl.* p. 34, t. 26; *Moq. in DC. Prodr.* xiii. 2, p. 188; *Ledeb. Fl. Ross.* iii. p. 800; *Hook. f. Fl. Brit. Ind.* v. p. 17.

CHIHLI: near Peking (*Bretschneider*! *Bushell*!). Herb. Kew.

South Russia to North-west India, and through Siberia to Mandshuria.

2. **Salsola Kali,** *Linn. Sp. Pl.* ed. 1, p. 222; *Moq. in DC. Prodr.* xiii. 2, p. 187; *Hook. f. Fl. Brit. Ind.* v. p. 17; *Franchet, Pl. David.* p. 251 (var. tenuifolia, *Moq.*); *Debeaux, Fl. Tchef.* p. 118 (var. vulgaris, *auct. omn.*, et var. spicata, *Deb.*).

CHIHLI: Peking (*David* ex *Franchet*); SHANTUNG: Chefoo (ex *Debeaux*).

Spread all round the northern hemisphere, and also found in South Africa and Australia.

We have not seen any Chinese specimens that we could refer, with certainty, to this species, but this and *S. collina*, Pall., vary so much in aspect under different conditions that it is difficult to determine them from dried specimens.

3. **Salsola Soda,** *Linn. Sp. Pl.* ed. 1, p. 223; *Moq. in DC. Prodr.* xiii. 2, p. 189; *Boiss. Fl. Or.* iv. p. 953; *Franch. et Savat. Enum. Pl. Jap.* i. p. 388; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 248.

SHANTUNG: Chefoo (*Fauvel* ex *Franchet*).

South-western Europe through South Russia and Siberia to Japan.

In the Kew Herbarium are several specimens apparently of the genus *Salsola* which we have not attempted to deal with, namely: 146, Shantung (*Maingay*); 312, Kaichow hills, Shingking (*Ross*); and 119, Chefoo mountains (*Faber*).

1. **Haloxylon recurvum,** *Bunge in Boiss. Fl. Or.* iv. p. 949; *Hook. f. Fl. Brit. Ind.* v. p. 15.

Caroxylon recurvum, *Moq. in DC. Prodr.* xiii. 2, p. 175.

Caroxylon indicum, *Wight, Ic. Pl. Ind. Or.* t. 1794.

YUNNAN (*Anderson* !). Herb. Kew.

Afghanistan, North-west India, and the Deccan peninsula.

1. **Basella rubra,** *Linn. Sp. Pl.* ed. 1, p. 272; *Moq. in DC. Prodr.* xiii. 2, p. 222; *Benth. Fl. Hongk.* p. 283; *Hook. f. Fl. Brit. Ind.* v. p. 20; *Wight, Ic. Pl. Ind. Or.* t. 896.

Basella alba, *Linn. Sp. Pl.* ed. 1, p. 272.

Basella nigra, *Lour. Fl. Cochinch.* p. 183; *Bretschn. Early Res.* p. 169.

FORMOSA: Takow (*Playfair* !); KWANGTUNG: Pakhoi (*Playfair* !), without locality (*Wenyon* !); HONGKONG (*Wilford* !); HAINAN (*A. Henry* !). Mus. Brit.; Herb. Kew.

Tropical Asia and Africa; often cultivated, or existing as an escape from cultivation.

110. PHYTOLACCACEÆ.

1. **Phytolacca acinosa,** *Roxb. Fl. Ind.* ii. p. 458; *Franch. et Savat. Enum. Pl. Jap.* i. p. 385; *Hook. f. Fl. Brit. Ind.* v. p. 21; *Franchet, Pl. David.* p. 252; *Maxim. in Ind. Sem. Hort. Petrop.* 1869, *Suppl.* p. 23 (var. esculenta); *Hance in Journ. Bot.* 1882, p. 38; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 245.

Phytolacca decandra, β. acinosa, *Moq. in DC. Prodr.* xiii. 2, p. 33.

Phytolacca Kæmpferi, *A. Gray in Mem. Amer. Acad.* n. s. vi. p. 404.

Phytolacca octandra, *Bunge, Enum. Pl. Chin. Bor.* p. 57, non *Linn.*

Phytolacca decandra, *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476, non *Linn.*

Phytolacca pekinensis, *Hance in Journ. Bot.* 1869, p. 166.

Pircunia Latbenia, *Moq. in DC. Prodr.* xiii. 2, p. 29; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476.

CHIHLI: near Peking (*Bunge*! *Bretschneider*!); SHINGKING: Chienshan (*Ross*!); FORMOSA: Kelung (*Wilford*, 511!); HUPEH: Ichang, Patung, and Nanto (*A. Henry*!); SZECHUEN: South Wushan (*A. Henry*!); COREAN ARCHIPELAGO: Port Hamilton (*Wilford*, 657! *Oldham*, 671!). Mus. Brit.; Herb. Kew.

North India, wild or cultivated, from Kashmir to Bhotan, and in Japan. This is commonly cultivated in China, apparently both as an esculent and as a drug.

111. POLYGONACEÆ*.

1. **Polygonum alatum,** *Hamilt.* ex *D. Don. Prodr. Fl. Nep.* p. 72; *Spreng. Syst. Veg.* iv. *Cur. post.* p. 154; *Hook. f. Fl. Brit. Ind.* v. p. 41.

Polygonum punctatum, *Hamilt.* ex *D. Don, Prodr. Fl. Nep.* p. 72, non alior.

Polygonum nepalense, *Meisn. Monogr. Polyg.* p. 84, et *in DC. Prodr.* xiv. p. 128; *Franch. et Savat. Enum. Pl. Jap.* i. p. 398, et ii. p. 480; *Franchet, Pl. David.* p. 255; *Wight, Ic. Pl. Ind. Or.* t. 1804.

CHIHLI: near Peking (*Bullock*!); HUPEH: Patung district and Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: mount Omei at 3500 ft. (*Faber*!). Mus. Brit.; Herb. Kew.

Afghanistan to Ceylon, Japan, and the Malay Archipelago, and in Abyssinia.

2. **Polygonum alpinum,** *Allioni, Fl. Pedem.* ii. p. 206, t. 68. f. 1; *Hook. f. Fl. Brit. Ind.* v. p. 49.

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* We have found it impossible to deal satisfactorily with the Chinese specimens of *Polygonum* § *Persicaria* without examining the whole section, a task involving more time than we can devote to one genus in this preliminary work. It seems probable, however, that too many species have been made; for, judging from a careful sorting (without dissecting), the limits of *P. minus*, Linn., *P. serrulatum*, Lag., *P. Posumbu*, Hamilt., and *P. flaccidum*, Meisn., are very obscure.

Polygonum polymorphum, *Ledeb. Fl. Ross.* iii. p. 524; *Meisn. in DC. Prodr.* xiv. p. 139; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 477; *Franchet, Pl. David.* p. 257 (β. salignum); *Maxim. in Mél. Biol.* ix. p. 618; *Debeaux, Fl. Tchef.* p. 122 (var. arenarium).

Polygonum sibiricum, *Linn. f. Suppl.* p. 228, non *Laxm.*

CHIHLI: Peking (*Bretschneider! Bullock!*); SHINGKING: Kaichow to Kinchow (*Ross!*); SHANTUNG: Chefoo (*Faber! Maingay!*); COREA: Chemulpo (*Carles!*), East side (*Perry!*). Mus. Brit.; Herb. Kew.

Western Europe to North-western India, and through Siberia to Japan; also in eastern North America.

3. **Polygonum amphibium,** *Linn. Sp. Pl.* ed. 1, p. 361; *Meisn. in DC. Prodr.* xiv. p. 115; *Hook. f. Fl. Brit. Ind.* v. p. 34; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 249.

CHINA: without locality (*Staunton!*); CHIHLI: Peking (ex *Maximowicz*); SHANTUNG (*Maingay!*). Mus. Brit.; Herb. Kew.

All round the north temperate zone.

Var. **vestitum,** Hemsl.; terrestre, rigidum, caule densissime longeque strigoso-hirsuto, foliis dense strigillosis, spica breviter pedunculata.

SHANTUNG: Chefoo (*Forbes!*). Herb. Kew.

At first sight this would not be recognized as a variety of *P. amphibium*, Linn., but there are specimens in the Kew Herbarium from Central Asia, intermediate in character between it and the almost glabrous European terrestrial state of the species.

4. **Polygonum amplexicaule,** *D. Don, Prodr. Fl. Nep.* p. 70; *Meisn. in DC. Prodr.* xiv. p. 126; *Hook. f. Fl. Brit. Ind.* v. p. 32; *Bot. Reg.* 1839, t. 46; *Bot. Mag.* t. 6500; *Hook. Ic. Pl.* xviii. t. 1743 (var. sinense).

Polygonum ambiguum, *Meisn. in DC. Prodr.* xiv. p. 126; *Wight, Ic. Pl. Ind. Or.* t. 1797.

Polygonum speciosum, *Meisn. loc. cit.*

HUPEH: Patung district (*A. Henry!*). Mus. Brit.; Herb. Kew.

North India from Murree to Sikkim.

5. **Polygonum aviculare,** *Linn. Sp. Pl.* ed. 1, p. 362; *Meisn. in DC. Prodr.* xiv. p. 97; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Debeaux, Fl. Tients.* p. 38, et *Fl. Tchef.* p. 121, et *Fl. Shangh.* p. 52; *Franchet, Pl. David.* p. 253, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 248; *Hance in Journ. Bot.* 1883, p. 355; *Hook. f. Fl. Brit. Ind.* v. p. 26; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 478 (varietates plures).

CHIHLI, SHINGKING and COREA to HUPEH and KIANGSI (*Carles*! *Perry*! *Oldham*! *A. Henry*! and others). Mus. Brit.; Herb. Kew.

Now generally dispersed in temperate regions, but believed to be indigenous only in Europe, North Africa, and Asia.

6. **Polygonum barbatum,** *Linn. Sp. Pl.* ed. 1, p. 362; *Meisn. in DC. Prodr.* xiv. p. 104; *Benth. Fl. Hongk.* p. 288; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 240; *Hook. f. Fl. Brit. Ind.* v. p. 37; *Henriques in Bol. Soc. Brot.* iii. p. 143.

CHINA: without locality (*Fortune,* 41!); KIANGSU: Shanghai (*Maingay*!); CHEKIANG: Ningpo (*Swinhoe,* hb. *Hance,* 9232!); FOKIEN: Amoy (*Hance,* 1481!); FORMOSA: Tamsui (*Oldham,* 426!), Takow (*Playfair*!); HUPEH: Ichang (*A. Henry*!); SZECHUEN: Chungking to Kiating (*Faber*!); KWANGTUNG: Pakhoi (*Playfair*!), without locality (*Sampson & Hance,* 9392!); LUCHU ARCHIPELAGO (*Beechey*!). Mus. Brit.; Herb. Kew.

Widely spread in tropical and subtropical Asia and Africa, and also found in North-eastern Australia.

7. **Polygonum Bistorta,** *Linn. Sp. Pl.* ed. 1, p. 360; *Meisn. in DC. Prodr.* xiv. p. 125; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 479; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Debeaux, Fl. Tchef.* p. 122; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 249; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 8.

CHIHLI: near Peking (*Bretschneider*!); SHINGKING: various localities (*James*!); SHANTUNG: Chefoo (ex *Debeaux*); KANSUH (ex *Kanitz*). Mus. Brit.; Herb. Kew.

All round the north temperate zone, and extending into arctic and alpine regions.

8. **Polygonum Blumei,** *Meisn. in Ann. Mus. Bot. Lugd.-Bat.*

ii. p. 57; *Miq. in op. cit.* iii. p. 135; *Franch. et Savat. Enum. Pl. Jap.* ii. pp. 473 et 479.

Specimens in the Kew Herbarium bearing this name are apparently the same as *P. serrulatum*, Lag., but, for reasons given in a footnote at the beginning of the genus, we have not attempted to deal exhaustively with the Chinese species of this section.

9. **Polygonum Bungeanum**, *Turcz. in Bull. Soc. Nat. Mosc.* 1840, p. 77; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Meisn. in DC. Prodr.* xiv. p. 120.

Polygonum pensylvanicum, *Bunge, Enum. Pl. Chin. Bor.* p. 57, non *Linn.*

NORTH CHINA: Kantai (*Bunge*!). Herb. Kew.

10. **Polygonum capitatum**, *Hamilt. in D. Don, Prodr. Fl. Nep.* p. 73; *Meisn. in DC. Prodr.* xiv. p. 129; *Hook. f. Fl. Brit. Ind.* v. p. 44; *Saund. Refug. Bot.* i. t. 11.

CHINA: without locality (*Staunton* in hb. Decandolle ex *Meisner*). "Specimen imperfectum foliis parvis." SZECHUEN: on wall of Omei district city (*Faber*!). Herb. Kew.

North India, Chamba to Bhotan and in the Khasia mountains. We have not seen the specimen referred to by Meisner, but suspect that it belongs rather to *P. chinense*, Linn.

11. **Polygonum chinense**, *Linn. Sp. Pl.* ed. 1, p. 363; *Meisn. in DC. Prodr.* xiv. p. 130; *Lour. Fl. Cochinch.* p. 241; *Hook. f. Fl. Brit. Ind.* v. p. 44; *Benth. Fl. Hongk.* p. 289; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 249; *Bot. Mag.* t. 5238 (var. foliis pictis); *Wight, Ic. Pl. Ind. Or.* t. 1806; *Hook. et Arn. Bot. Beech. Voy.* pp. 208, 269; *Franch. et Savat. Enum. Pl. Jap.* i. p. 398, et ii. p. 480.

Ampelygonum chinense, *Lindl. in Bot. Reg.* 1838, *Miscell.* p. 63.

Polyonum chinense, *a.* Thunbergianum, *Meisn. in Wall. Pl. As. Rar.* iii. p. 60.

Polygonum sinense, *Hook. et Arn. Bot. Beech. Voy.* p. 269.

SHANTUNG to SZECHUEN, KWANGTUNG, HAINAN, and FORMOSA common, especially in the south, and in all collections. Mus. Brit.; Herb. Kew.

Throughout India, Ceylon, and Malaya to the Philippine Islands and Japan.

12. **Polygonum ciliatum,** *Lour. Fl. Cochinch.* p. 243, non *Don*, ex *Meisn. in DC. Prodr.* xiv. p. 102.

Polygonum Loureiri, *Poir. in Lam. Encycl. Suppl.* iv. p. 667.

KWANGTUNG (ex *Loureiro*).

An altogether obscure species.

13. **Polygonum confusum,** *Meisn. in Wall. Pl. As. Rar.* iii. p. 53.

Polygonum bistortoides, *Boiss. Diag. Pl. Nov.* 1e série, v. p. 46.

Polygonum splendens, *Klotzsch in Bot. Ergeb. Waldem. Reise,* t. 88.

Polygonum paleaceum, *Wall. Cat.* 1684, ex *Hook. f. Fl. Brit. Ind.* v. p. 32.

Polygonum carneum, *Koch in Linnæa,* xxii. p. 197.

Polygonum Bistorta, *Linn.*, β. angustifolium, *Meisn. in DC. Prodr.* xiv. p. 125; *Boiss. Fl. Or.* iv. p. 1027.

SHANTUNG: Chefoo mountains (*Faber* !); HUPEH: Patung district and Hsingshan at 9000 ft. (*A. Henry* !); SZECHUEN: mount Omei (*Faber* !); YUNNAN (*Anderson* !). Mus. Brit.; Herb. Kew.

Asia Minor, Persia, and Eastern India.

It is questionable whether *P. confusum*, Meisn. (syn. *P. Bistorta, β. angustifolium*), and *P. paleaceum*, Wall., as limited in the 'Flora of British India,' be exactly the same. It was an oversight, however, on the part of the author to state that Meisner had not taken up this species, or variety, for it is hardly distinguishable from *P. Bistorta,* Linn., to which he reduces it.

14. **Polygonum criopolitanum,** *Hance in Ann. Sc. Nat.* 5me série, v. p. 238.

KIANGSI: Kiukiang (*Shearer*); HUPEH: Ichang and immediate neighbourhood (*A. Henry* !); KWANGTUNG: open waste places around Canton (*Hance*, 10506 !), along the West river (*Sampson* ! *Ford* !). Mus. Brit.; Herb. Kew.

15. **Polygonum cuspidatum,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 731; *Meisn. in DC. Prodr.* xiv. p. 136; *Franch. et Savat. Enum. Pl. Jap.* i. p. 402, et ii. p. 481; *S. Moore in Journ. Bot.* 1875, p. 231; *Franchet, Pl. David.* p. 256, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 249; *Bot. Mag.* t. 6503; *Jaarb. Tuinb.* 1849, p. 30, cum ic. color.; *Regel's Gartenfl.* ix. t. 291;

Lindl. & Paxt. Fl. Gard. i. p. 137, cum fig. xylogr.; *Rev. Hort.* 1858, p. 630, cum fig. xylogr.; *Vriese in Nederl. Kruidk. Arch.* ii. p. 254.

Polygonum Sieboldi, *Hortul.* ex *Meisn. in DC. Prodr.* xiv. p. 136, non *Meisn.*

KIANGSU: Shanghai (*Carles*!); KIANGSI: Kiukiang (*Shearer*!); FORMOSA: Kelung (*Ford*!); HUPEH: Ichang, Patung, and Nanto (*A. Henry*!); SZECHUEN: mount Omei at 3000 ft. (*Faber*!). Mus. Brit.; Herb. Kew.

Japan.

Polygonum compactum, Hook. f. (Bot. Mag. t. 6476), is very near this. Indeed, with a long series of specimens we do not find any character by which they may be distinguished from each other, except perhaps the shape of the fruit. Dr. Henry's 365 from the Patung district has distinctly crisped margins to the leaves, but is otherwise nearer *P. cuspidatum*.

16. **Polygonum cymosum,** *Trevir. in Delect. Sem. Hort. Vratisl.* 1824, et *in Nov. Act. Nat. Cur.* xiii. p. 177; *Franchet, Pl. David.* p. 257.

Fagopyrum cymosum, *Meisn. in Wall. Pl. As. Rar.* iii. p. 63, et *in DC. Prodr.* xiv. p. 144; *Kurz in Journ. Bot.* 1873, p. 193; *Hook. f. Fl. Brit. Ind.* v. p. 55; *Lindl. in Bot. Reg.* 1846, t. 26.

Polygonum triangulare, *Wall.* ex *Meisn. in Wall. Pl. As. Rar.* iii. p. 63.

Fagopyrum triangulare, *Meisn. in Wall. Pl. As. Rar.* iii. p. 63, et *in DC. Prodr.* xiv. p. 144; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476.

Polygonum volubile, *Turcz. in Bull. Soc. Nat. Mosc.* 1840, p. 77.

Polygonum acutatum, *Lehm. Cat. Sem. Hort. Hamb.* 1820, et *Pugill.* i. p. 28.

Polygonum dibotrys, *D. Don, Prodr. Fl. Nep.* p. 73.

Fagopyrum emarginatum, β. kunawarense, *Meisn. in DC. Prodr.* xiv. p. 144, ex *Hook. f. Fl. Brit. Ind.* v. p. 55.

CHIHLI: Peking "an sponte?" (*Maximowicz*); KIANGSU: Shanghai (*Maingay*!); KIANGSI: Kiukiang (*David* ex *Franchet*); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); YUNNAN (*Anderson*). Mus. Brit.; Herb. Kew.

North India.

A specimen in the Kew Herbarium collected by Dr. Bretschneider and labelled *Fagopyrum emarginatum*, β. *kunawarense*, is *Polygonum Fagopyrum*, Linn.

✓ 17. **Polygonum** (§ **Liniaria ?**) **cynanchoides**, *Hemsl.*, n. sp.

Herba perennis? volubilis, caulibus elongatis tenuiusculis teretibus retrorsim hispidulo-pilosis. *Folia* longe petiolata, papyracea, mollia, ferrugineo-pubescentia, late hastato-cordata, circumscriptione suborbicularia, usque ad 2½ poll. diametro, abrupte acuteque acuminata, lobis basilaribus etiam sæpius breviter acuminatis, supra parce strigillosa, subtus dense pubescentia, venis immersis inconspicuis; petiolus graciliusculus subteres, sæpius circiter pollicaris, retrorsim hispidulo-pilosus; ochreæ parvæ, inconspicuæ, arcte appressæ, breviter acuminatæ vel fere truncatæ? *Flores* minimi (bene evoluti non visi), glabri, laxe racemosso-spicati vel anguste paniculati, pedunculo axillari elongato gracili; perianthii segmenta 5, orbiculari-concava; stamina 8; stylus brevissime trifidus. *Nux* glabra, trigona?

HUPEH: Kuei (*A. Henry*!). Herb. Kew.

Very distinct in its twining habit, with soft, hairy, broadly cordate-hastate almost tricaudate leaves and slender inflorescence. In foliage and habit it strongly resembles some asclepiads, especially the genus *Cynanchum*.

✓ 18. **Polygonum** (§ **Echinocaulon**) **dissitiflorum**, *Hemsl.*, n. sp.

Herba annua, ramosa, suberecta vel ad plantas alias incumbens, caulibus flexuosis 2–3 pedalibus infra inflorescentiam levibus vel parcissime aculeolatis ad nodos incrassatis. *Folia* omnia distincte petiolata, membranacea, oblongo-cordata vel hastata, cum petiolo 4–5 poll. longa, acute acuminata, ciliata, vix hispidula, subtus secus costam parce setulosa, petiolo gracili circiter pollicari plus minusve setosi; ochreæ scariosæ, latæ, obliquæ, apertæ, apice paucisetosæ. *Flores* parvi (sesquilineam circiter longi), glabri, laxissime paniculati distantes (ramulis circiter pollicaribus sæpius trifloris), bracteis setoso-ciliatis suffulti, panicularum ramulis graciliusculis divaricatis dense glanduloso-setulosis vel fere glabris; perianthii 5-fidi segmenta obovato-spathulata, persistentia, nucem involventia; stamina 8. *Nux* glabra, nitida, sphæroidea, simul obscure trigona, embryo fere rectus, radicula crassa quam cotyledones longiore.

SHINGKING: without locality (*Ross*!); CHEKIANG: Ningpo mountains (*Faber*!). Herb. Kew.

Near *P. arifolium*, Linn., but readily distinguished from that and all the rest of the section having similar foliage by the scattered not capitate flowers.

19. **Polygonum divaricatum,** *Linn. Sp. Pl.* ed. 1, p. 363; *Meisn. in DC. Prodr.* xiv. p. 140; *Ledeb. Fl. Ross.* iii. p. 526; *Franchet, Pl. David.* p. 257.

CHIHLI: Jehol (*David* ex *Franchet*).

Western Siberia to Mandshuria.

20. **Polygonum Dumetorum,** *Linn. Sp. Pl.* ed. 2, p. 522; *Ledeb. Fl. Ross.* iii. p. 528; *Hook. f. Fl. Brit. Ind.* v. p. 54; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 249.

SHANTUNG: Chefoo (*Fauvel* ex *Fanchet*).

Western Europe to North-west India and Siberia.

21. **Polygonum Fagopyrum,** *Linn. Sp. Pl.* ed. 1, p. 364; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *DC. Orig. Pl. Cult.* ed. 3, p. 279.

Fagopyrum esculentum, *Mœnch. Method. Pl.* p. 290; *Meisn. in DC. Prodr.* xiv. p. 143; *Hook. f. Fl. Brit. Ind.* v. p. 55; *Debeaux, Fl. Tients.* p. 38, et *Fl. Tchef.* p. 123; *Franch. et Savat. Enum. Pl. Jap.* i. p. 403; *Franchet, Pl. David.* p. 257, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 250.

Polygonum emarginatum, *Roth, Catal. Bot.* i. p. 48; *Bot. Reg.* t. 1065.

Fagopyrum emarginatum, *Meisn. in DC. Prodr.* xiv. p. 143.

CHIHLI, KANSUH, and SHINGKING to HUPEH, SZECHUEN, CHEKIANG, and KWANGTUNG; cultivated and colonized (*Fortune*! *Oldham*! *Bretschneider*! *Bushell*! *Bourne*! *Ross*! and others). Mus. Brit.; Herb. Kew.

Siberia and Mandshuria, and naturalized in many other countries.

22. **Polygonum flaccidum,** *Meisn. in DC. Prodr.* xiv. pro parte, et excl. synon., non *Roxb.*, ex *Hook. f. Fl. Brit. Ind.* v. p. 39; *Hance in Ann. Sc. Nat.* 5^{m} série, v. p. 237 (var. ripularum).

KWANGTUNG (*Sampson*, hb. *Hance*, 7563!). Mus. Brit.; Herb. Kew.

This species, as limited in the 'Flora of British India,' is common throughout India, Ceylon, and Malaya. See note under *P. Posumbu*, Hamilt.

23. **Polygonum Forbesii,** *Hance in Journ. Bot.* 1883, p. 100.

SHANTUNG: Chefoo, at the temple of the bamboos (*Forbes* & *Carles*!). Mus. Brit.; Herb. Kew.

We find no character to separate this from the variable

P. cuspidatum, Sieb. et Zucc., but we refrain from reducing it, as we have not dissected the flowers.

24. **Polygonum glabrum**, *Willd. Sp. Pl.* ii. p. 447; *Meisn. in DC. Prodr.* xiv. p. 114; *Benth. Fl. Hongk.* p. 288; *Hook. f. Fl. Brit. Ind.* v. p. 34; *Wight, Ic. Pl. Ind. Or.* t. 1799; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 237 (var. fucatum); *Henriques in Bol. Soc. Brot.* iii. p. 143.

China: without locality (*Forbes*!); Hupeh: Patung district (*A. Henry*!); Kwangtung: various localities (*Hance*, 1117, 10507! *Callery*!); Hainan (*A. Henry*!). Mus. Brit.

Tropical and subtropical regions in Asia, Africa, and America.

✓ 25. **Polygonum (§ Fagopyrum) gracilipes**, *Hemsl.*, n. sp.

Herba annua, erecta, ramulis floriferis pendulis, 6–24 poll. alta, parcissime hispidula, caulibus gracilibus multistriatis plus minusve ramosis. *Folia* longe graciliterque petiolata, membranacea, cordato-ovata vel cordato-hastata, vel interdum triangulari-cordata, absque petiolo usque ad 2 poll. longa, sed sæpius breviora, obtusiuscula, interdum obscurissime pauci-lobulata, utrinque præcipue secus venas hispidula; petiolus filiformis, laminam æquans vel brevior; ochreæ parvæ, maxime obliquæ, integræ. *Flores* glabri, haud lineam longi, laxissime racemoso-spicati, pedunculis axillaribus elongatis fere capillaribus pendulis; perianthii fere 5-partiti segmenta subæqualia, late obovata; stamina 8; styli 3, distincti, patentes vel recurvi, stigmatibus capitatis. *Nux* glabra, nitida, acute triquetra vel trialata; cotyledones latissimæ leviter convolutæ vel complicatæ.

Hupeh: Patung district (*A. Henry*, 1807 partim, 4742, 4789, 5057!); Szechuen: mount Omei at 3000 to 4000 ft. (*Faber*!). Mus. Brit.; Herb. Kew.

The elongated very slender inflorescence distinguishes this species from the rest of the section. The cotyledons are only slightly convolute, or hardly more than folded a little obliquely across each other. There seems to be every gradation between the very broad much-convolute cotyledons of *Polygonum Fagopyrum*, L., and the straight narrow embryo of the majority of the figured *Polygoni*. *P. Gilesii*, Hemsl. (Hook. Ic. Pl. t. 1756), is exactly intermediate in character.

26. **Polygonum Hydropiper**, *Linn. Sp. Pl.* ed. 1, p. 361; *Meisn. in DC. Prodr.* xiv. p. 109; *Benth. Fl. Hongk.* p. 288;

Hance in Ann. Sc. Nat. 5^{me} série, v. p. 240; *Franchet, Pl. David.* p. 254, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 249; *Hook. f. Fl. Brit. Ind.* v. p. 39.

SHINGKING (*Ross*!); KIANGSU: Shanghai (*Faber*!); HUPEH: Patung, Ichang and immediate neighbourhood (*A. Henry*!); YUNNAN (*Anderson*!); KWANGTUNG: various localities (*Wenyon*! *Hance*, 5548! *Ford*!); HONGKONG (*Wilford*!). Mus. Brit.; Herb. Kew.

Western Europe and North Africa to Java and Japan, and in North America and Australia.

27. **Polygonum interruptum,** *Bunge, Enum. Pl. Chin. Bor.* p. 58; *Meisn. in DC. Prodr.* xiv. p. 111; *Hance in Journ. Linn. Soc.* xiii. p. 118, et *in Ann. Sc. Nat.* 5^{me} série, v. p. 240; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476.

CHIHLI: mountains of Zuiweyshan (*Bunge*!). Herb. Kew.

Perhaps a depauperated state of *P. minus*, Linn.

28. **Polygonum japonicum,** *Meisn. in DC. Prodr.* xiv. p. 112 et p. 695; *Franch. et Savat. Enum. Pl. Jap.* i. p. 396, et ii. pp. 474 et 479; *Franchet, Pl. David.* p. 254.

KIANGSU: Shanghai (*Faber*!); HUPEH: Ichang, Nanto, and mountains to the northward (*A. Henry*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

29. **Polygonum jucundum,** *Meisn. Monogr. Polyg.* p. 71, et *in DC. Prodr.* xiv. p. 103; *Hance in Journ. Linn. Soc.* xiii. p. 119.

CHINA: without locality (*Staunton*!); KWANGTUNG: Whampoa (*Hance*, 6057!). Mus. Brit.; Herb. Kew.

There is no really authenticated specimen of this somewhat obscure species in the London herbaria.

30. **Polygonum lanigerum,** *R. Br. Prodr. Fl. Nov. Holl.* p. 419; *Meisn. in DC. Prodr.* xiv. p. 117; *Maxim. in Mél. Biol.* ix. p. 618; *Hook. f. Fl. Brit. Ind.* v. p. 35.

Polygonum glutinosum, *Wall.* ex *Meisn. in DC. Prodr.* xiv. p. 120; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 240 = P. lanigerum, var. glutinosum, *Hook. f. loc. cit.*

SHINGKING: Kaichow to Kinchow (*Ross*!); KIANGSU: Shanghai (*Maingay*! *Faber*!); FORMOSA (*Oldham*! *Wilford*!); SZECHUEN: summit of mount Omei (*Faber*!); KWANGTUNG: Pakhoi (*Playfair*!). Mus. Brit.; Herb. Kew.

Tropical and subtropical Asia, Africa, America, and Australia, and extending into some temperate regions.

A specimen from the summit of mount Omei has relatively large densely-clustered flowers, and the tomentum on the under surface of the leaves is buff-coloured.

Var. **cristatum**, *Hemsl.*; luxurians, multicaulis, foliis minoribus minus pubescentibus, floribus densissime spicato-paniculatis.

FORMOSA: without locality (*Oldham*, 434!). Herb. Kew.

The very large condensed inflorescence of these specimens and the relatively small leaves at first suggest an affinity with *P. alpinum*, All., and *P. polystachyum*, Wall.; but an examination of the nutlet reveals the true relationship.

31. **Polygonum lapathifolium,** *Linn. Sp. Pl.* ed. 1, p. 360; *Meisn. in DC. Prodr.* xiv. p. 119; *Benth. Fl. Hongk.* p. 288; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Franch. et Savat. Enum. Pl. Jap.* i. p. 397, et ii. p. 479; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 249; *Hook. f. Fl. Brit. Ind.* v. p. 35.

Polygonum orientale, var. discolor, *Benth. in Hook. Lond. Journ.* i. p. 491.

Polygonum pensylvanicum, *Hance in sched. vix Linn.*

CHIHLI: Peking (*Swinhoe*, hb. *Hance*, 3192! *Bushell*!); SHINGKING: Newchang (*Webster*!); FORMOSA (*Oldham*, 432!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); KWANGTUNG: Macao and the islands adjacent (*Vachell*! *Millett*!); HONGKONG (*Hinds*!). Mus. Brit.; Herb. Kew.

Western Europe and Northern Africa to Japan and in North America, and naturalized in many other countries.

32. **Polygonum minus,** *Huds. Fl. Angl.* ed. 1, p. 148; *Meisn. in DC. Prodr.* xiv. p. 111; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 249; *Hook. f. Fl. Brit. Ind.* v. p. 36.

CHINA: without locality (*Forbes*!); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); KWANGTUNG: Whampoa (*Hance*, 7563!). Mus. Brit.; Herb. Kew.

Europe, temperate and subtropical Asia, and Australia.

33. **Polygonum multiflorum,** *Thunb. Fl. Jap.* p. 169; *Meisn.*

in DC. Prodr. xiv. p. 136; *Hance in Journ. Bot.* 1878, p. 13, et 1882, p. 293; *Franch. et Savat. Enum. Pl. Jap.* i. p. 402, et ii. p. 480.

Pleuropterus cordatus, *Turcz. in Bull. Soc. Nat. Mosc.* xxxi. 1 (1848), p. 587.

Polygonum chinense, *Houtt. Plantenk.* viii. p. 479, t. 49. f. 3, non *Linn.*

KIANGSU: Shanghai (*Carles! Faber! Maingay!*); FOKIEN: Amoy (*Fortune, 22!*); FORMOSA: Kelung and other localities (*Oldham! Ford!*); HUPEH: Ichang and Patung districts (*A. Henry!*); SZECHUEN (*Faber!*). Mus. Brit.; Herb. Kew.

Japan.

34. **Polygonum muricatum,** *Meisn. Monogr. Polyg.* p. 74, et *in DC. Prodr.* xiv. p. 133; *Hook. f. Fl. Brit. Ind.* v. p. 45, var.

HUPEH: Chienshih (*A. Henry*, 7408!). Herb. Kew.

Central and Eastern Himalaya and the Khasia mountains.

35. **Polygonum nodosum,** *Pers. Syn. Pl.* i. p. 440; *Meisn. in DC. Prodr.* xiv. p. 118; *Franch. et Savat. Enum. Pl. Jap.* i. p. 397, et ii. p. 479; *Franchet, Pl. David.* p. 254; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Debeaux, Fl. Shang.* p. 52; *Ledeb. Fl. Ross.* iii. p. 521.

Polygonum lapathifolium, var. nodosum, *Hook. f. Fl. Brit. Ind.* v. p. 35.

CHIHLI: Peking—*β incanum,* Ledeb. (*Bretschneider!*); HUPEH: Patung district and Ichang (*A. Henry!*). Herb. Kew.

Western Europe to Japan and in North America.

36. **Polygonum orientale,** *Linn. Sp. Pl.* ed. 1, p. 362; *Meisn. in DC. Prodr.* xiv. p. 123; *Benth. Fl. Hongk.* p. 288; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 240; *Franch. et Savat. Enum. Pl. Jap.* i. p. 397, et ii. p. 478; *Hook. f. Fl. Brit. Ind.* v. p. 30; *Bot. Mag.* t. 213.

Polygonum pilosum, *Roxb. Fl. Ind.* ii. p. 286; *Meisn. Monogr. Polyg.* p. 54 = P. orientale, *β.* pilosum, *Meisn. in DC. Prodr.* xiv. p. 123; *Debeaux, Fl. Shangh.* p. 52.

Lagunea cochinchinensis, *Lour. Fl. Cochinch.* p. 220.

Polygonum cochinchinensis, *Meisn. Monogr. Polyg.* p. 55.

CHIHLI and SHINGKING to HUPEH, HONGKONG, HAINAN, and FORMOSA: apparently common, though often cultivated (*Millett! Champion! Tate! Fortune! Webster!* and many other collectors). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya, and extending to Eastern Australia and Japan, but often existing only as a colonist.

37. **Polygonum pedunculare,** *Wall.* ex *Meisn. DC. Prodr.* xiv. p. 133; *Hance in Ann. Sc. Nat.* 5me série, v. p. 239; *Hook. f. Fl. Brit. Ind.* v. p. 48.

CHINA: without locality (*Forbes*!); CHEKIANG: Ningpo (*Faber*!); FOKIEN: Amoy (*Hance*!); FORMOSA: Kelung (*Oldham*, 430!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!). Mus. Brit.; Herb. Kew.

Eastern and Southern India, Ceylon, and Malaya to the Philippines and Australia.

38. **Polygonum perfoliatum,** *Linn. Sp. Pl.* ed. 2, p. 521; *Meisn. in DC. Prodr.* xiv. p. 132; *Hook. f. Fl. Brit. Ind.* v. p. 46; *Hance in Ann. Sc. Nat.* 5me série, v. p. 240; *Franch. et Savat. Enum. Pl. Jap.* i. p. 401, et ii. p. 480; *Franchet, Pl. David.* p. 255.

Echinocaulos perfoliatus, *Hassk. Hort. Bogor.* 1844, p. 85.

Echinocaulon perfoliatum, *Hassk. Pl. Jav. Rar.* p. 224.

Chylocalyx perfoliatus, *Hassk. in Flora,* 1842, Beibl. 2, p. 20; *Meisn. in Ann. Mus. Bot. Lugd.-Bat.* ii. pp. 65 et 212.

CHINA: without locality (*Millett*!); FORMOSA: Tamsui (*Oldham*, 420!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); SZECHUEN: Hokiang (*Faber*!); KWANGTUNG: Whampoa (*Hance*, 762!). Mus. Brit.; Herb. Kew.

Northern and Eastern India and Malaya to Japan.

39. **Polygonum (§ Bistorta) pergracilis,** *Hemsl.*, n. sp.

Herba perennis, fere omnino glabra vel glabrescens, rhizomate tenui, caulibus simplicibus filiformibus debilibus longioribus fere pedalibus. *Folia* tenuia, late cordato-ovata, absque petiolo circiter pollicaria, obtusa, pilis hispidulis parcissime conspersa, obscure reticulato-venosa, radicalia longe graciliterque petiolata, caulina breviter petiolata vel subsessilia simul arcte amplexicaulia; ochreæ circiter semipollicares, cylindricæ, integræ, subtruncatæ. *Flores* albo-rubri, minuti, laxiuscule racemoso-spicati; perianthii segmenta subæqualia, oblongo-lanceolata, subacuta. *Nux* (immatura tantum visa) glabra, lævis, triquetra, perianthium excedens.

SZECHUEN: summit of mount Omei (*Faber*!). Herb. Kew.

At first sight this plant suggests the idea of a very slender state of *P. Bistorta*, Linn.; but the very thin, cordate-ovate, long and slenderly-stalked radical leaves and two or three cauline leaves, in which the conspicuous straight transverse veins of *P. Bistorta* are wanting, together with the exceedingly slender flower-spikes, make it easily distinguishable. More material, however, is required to draw up a complete description.

40. **Polygonum Persicaria,** *Linn. Sp. Pl.* ed. 1, p. 361; *Meisn. in DC. Prodr.* xiv. p. 117; *Hook. f. Fl. Brit. Ind.* v. p. 35; *Franch. et Savat. Enum. Pl. Jap.* i. p. 396; *Franchet, Pl. David.* p. 254.

CHIHLI: Peking (*David* ex *Franchet*).

Widely spread in Europe, Asia, and Africa, and colonized in America and Australasia.

Possibly some of the specimens we have under *P. nodosum*, Pers., and *P. lapathifolium*, Linn., may be referable to this.

41. **Polygonum pilosum,** *Maxim.* (*sub* Kœnigia) *in Mél. Biol.* xi. p. 308.

KANSUH: western alpine regions on the Upper Hoangho and its affluents (*Przewalski* ex *Maximowicz*).

Sir Joseph Hooker (Fl. Brit. Ind. v. p. 24) has already reduced *Kœnigia islandica*, Linn., to *Polygonum*; and on this point Maximowicz says, speaking of his *K. pilosa* and *K. fertilis*, ... "Ochreæ folium juvenile involventes demum laceratodisruptæ tam completæ adsunt ac in *Polygonis*. Ita *Kœnigiæ* nunc a *Polygono* differentia unica in radicula elongata ponenda, an sufficiens?"

42. **Polygonum Pinetorum,** *Hemsl.*, n. sp.

Herba perennis, glabrescens, erecta, 1½–4 ped. alta, caulibus subsimplicibus sæpius crassiusculis internodiis quam folia brevioribus. *Folia* breviter petiolata, membranacea, lanceolata, 4–7 poll. longa, longissime acuminata, basi cuneata vel interdum obscure obliqueque bilobata, integra, supra parcissime minuteque strigillosa, subtus præsertim secus venas puberula; ochreæ amplæ, scarioso-membranaceæ, brunneæ, eciliatæ, ut videtur truncatæ sed cito laceratæ. *Flores* albi (*A. Henry*), circiter 3–4 lineas diametro, pauci, laxe paniculati, glabri, omnes distincte graciliterque pedicellati, bracteis minutissimis subtendi; paniculis puberulis gracillimis axillaribus vel pseudoterminalibus quam folia sæpius brevioribus; perianthii alte 5-fidi segmenta herbacea, paulum inæqualia, late obovato-spathulata; stamina 8;

ovarium conoideum vel sphæroideum, stylis 3 distinctis patentibus vel leviter recurvis stigmatibus capitatis. *Nux* non visa.

HUPEH: Fang and Hsingshan; very common in conifer-woods on summit of mountains at 9000 to 10,000 ft., growing in myriads and often reaching four feet high (*A. Henry*, 6848!); SZECHUEN: summit of mount Omei (*Faber*!). Herb. Kew.

In general appearance this strongly resembles *P. campanulatum*, Hook. f., but it is easily distinguished by its few-flowered very lax panicles and minute bracts. The perianth, however, does not exhibit any tendency to become fleshy nor the ovary to develop into a winged nutlet.

43. **Polygonum plebeium,** *R. Br. Prodr. Fl. Nov. Holl.* p. 420; *Meisn. in DC. Prodr.* xiv. p. 94; *Hook. f. Fl. Brit. Ind.* v. p. 27; *Benth. Fl. Hongk.* p. 287; *Hance in Ann. Sc. Nat.* 5^me^ série, v. p. 240 (Roxburghii).

Polygonum herniarioides, P. Miquelianum, P. effusum, P. Roxburghii, P. illecebroides, P. cliffortioides, P. Perrottetii, et P. ciliosum, *Meisn. in DC. Prodr.* xiv. pp. 92–95, ex *Benth. loc. cit.*

Polygonum aviculare, *Lour. Fl. Cochinch.* p. 241, et *Walp. in Nov. Act. Nat. Cur.* xix. *Supp.* 1, p. 408, non *Linn.*, = P. Roxburghii, *a.* longifolium, ex *Meisn. in DC. Prodr.* xiv. p. 93.

Polygonum Meyeni, *C. Koch in Linnæa*, xxii. p. 205.

Polygonum aviculare, var. minutiflorum, *Franchet, Pl. David.* p. 253.

FORMOSA (*Oldham*, 428, 433!); HUPEH: Patung district, Ichang and immediate neighbourhood (*A. Henry*!); SZECHUEN: Chungking (*Faber*!); KWANGTUNG: Pakhoi (*Playfair*!), North river (*Ford*!); HONGKONG (*Wright*! *Wilford*!); HAINAN (*Swinhoe*!). Mus. Brit.; Herb. Kew.

Widely spread in tropical and subtropical Asia, Africa, and Australia, and extending into some temperate regions.

44. **Polygonum Posumbu,** *Hamilt. in D. Don, Prodr. Fl. Nep.* p. 71, non *Wall.* ex *Hook. f. Fl. Brit. Ind.* v. p. 38; *Franchet, Pl. David.* p. 253; *Franch. et Savat. Pl. Jap.* i. p. 394, et ii. p. 473.

Polygonum cæspitosum, *Blume, Bijdr.* p. 532; *Franch. et Savat. Enum. Pl. Jap.* i. p. 395.

CHIHLI: Peking (*Bushell*! *Bretschneider*!); KIANGSI: Kiukiang (*Shearer*!); FORMOSA (*Oldham*, 425!); HUPEH: Patung district (*A. Henry*, 4797, 4939!); SZECHUEN: mount Omei (*Faber*!). Mus. Brit.; Herb. Kew.

Eastern Himalayas, Khasia, Java, and Japan.

The limits between this, *P. flaccidum*, Meisn., and *P. serrulatum*, Leg., are very obscure, and we have not succeeded in discriminating the very large number of specimens in the Kew Herbarium.

45. **Polygonum prætermissum,** *Hook. f. Fl. Brit. Ind.* v. p. 47.

Polygonum strigosum, *Benth. Fl. Austral.* v. p. 268, partim.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 567, 962, 1669, 3659!). Mus. Brit.; Herb. Kew.

Eastern India, Ceylon, and Tasmania.

46. **Polygonum (§ Cephalophilon) radicans,** *Hemsl.*, n. sp.

Herba parva, perennis? procumbens, multicaulis, caulibus tenuibus simul subcarnosus 3–6 poll. longis, internodiis quam folia longioribus lineas 2 pilis retrorsis instructis. *Folia* distincte petiolata, crassa, subcarnosa, cum petiolo 3–4 lineas longa, ovata, obtusa, integerrima, primum utrinque, præcipue subtus, strigillosa, evenosa, costa crassa subtus elevata; ochreæ breves, laxæ, subscariosæ, strigillosæ. *Flores* parvi, circiter 10–12 in axillis foliorum superiorum aggregati, breviter vel brevissime pedicellati, congesti; perianthii segmenta 5, subæqualia, obovato-spatulata, glabra; stamina bene evoluta non visa; styli 3, brevissimi. *Nux* glabra, triquetra vel fere trialata, sessilis.

SZECHUEN: summit of mount Omei (*Faber*!). Herb. Kew.

Not very near any Chinese species, though resembling a starved condition of *P. nepalense*, from which its thick distinctly stalked leaves at once distinguish it. *P. criopolitanum*, Hance, is somewhat similar in habit, but that has long narrow thin leaves.

47. **Polygonum runcinatum,** *Hamilt. in D. Don, Prodr. Fl. Nep.* p. 73; *Meisn. in DC. Prodr.* xiv. p. 130; *Hook. f. Fl. Brit. Ind.* v. p. 43: var. sinense, *Hemsl.* fere glabrum capitulis minoribus.

While we have no hesitation in referring the Chinese specimens to this species, they present some slight differences, and as the specific name is not quite appropriate, we add a description.

Herba perennis, glabrescens, erecta, multicaulis, caulibus crassiusculis striatis simplicibus usque 3 ped. altis. *Folia* plus minusve distincte petiolata, membranacea, sæpius deltoideo-

ovata, nunc angusta nunc lata, cum petiolo usque ad 6 poll. longa sed sæpius breviora, longe acuteque acuminata, basi subtruncata simul subite longeque cuneata, vel lobis 2 parvis oppositis oblique oblongis rotundatis sæpius a basi distantibus interdum basilaribus stipuliformibus instructa (*i. e.* trilobato-pinnatifida lobo terminali permaxime), ciliolata, utrinque primum parcissime strigillosa simul crebre densissimeque pustulata; ochreæ laxiuscule cylindrico-tubulosæ, vix semipollicares, truncatæ, setuloso-ciliatæ. *Flores* albi vel rosei, capitulis minoribus.

HUPEH: Ichang, Patung, Nanto, Chienshih, Changyang, and Hsingshan (*A. Henry*, 1344, 3889, 6075, 6075 A, 6001, 6954!); SZECHUEN: summit of mount Omei (*Faber*!). Mus. Brit.; Herb. Kew.

Central and Eastern Himalaya, Khasia mountains and Java.

48. **Polygonum sagittatum**, *Linn. Sp. Pl.* ed. 1, p. 363; *Hort. Cliff.* p. 151, t. 12; *Meisn. in DC. Prodr.* xiv. p. 132; *Maxim. in Mél. Biol.* ix. p. 617; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 476; *Franchet, Pl. David.* p. 256, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 249; *Hook. f. Fl. Brit. Ind.* v. p. 47.

Polygonum Sieboldi, *Meisn. in DC. Prodr.* xiv. p. 133.

CHIHLI: Peking (*Bretschneider*!), Jehol (*David*!); SHINGKING: Peiling (*Webster*!); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); KIANGSI: Kiukiang (*Shearer*!); FORMOSA (*Oldham*, 435!); HUPEH: Ichang and Patung districts (*A. Henry*!); KWANGTUNG: Lofaushan (*Ford*!); HAINAN (*A. Henry*!); COREAN ARCHIPELAGO: Long Reach (*Oldham*, 696!). Mus. Brit.; Herb. Kew.

North and Eastern India, Siberia, Mandshuria, Japan, and eastern North America.

49. **Polygonum scandens**, *Linn. Sp. Pl.* ed. 1, p. 364; *Meisn. in DC. Prodr.* xiv. p. 135; *Franch. et Savat. Enum. Fl. Jap.* ii. p. 476; *Franchet, Pl. David.* p. 256 (var. alato-dentatum).

Polygonum dentato-alatum, *F. Schmidt in Maxim. Prim. Fl. Amur.* pp. 232 et 476.

CHIHLI: Peking (*Bretschneider*!); SHANTUNG: Chefoo (*Forbes*!). Herb. Kew.

Mandshuria, Sachalin, and Japan.

This is very near *P. Dumetorum*, Linn., and is united with it by some botanists, thus giving it a range from Western Europe to Japan and North America.

50. **Polygonum senticosum,** *Franch. et Savat. Enum. Pl. Jap.* i. p. 401, et ii. p. 480.

Chylocalyx senticosus, *Meisn. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 65.

Polygonum perfoliatum, *Thunb.*, ex parte, teste *Meisn.*

Polygonum Babingtonii, *Hance in Ann. Sc. Nat.* 5me série, v. p. 239, non *Endl.*

Polygonum typhoniifolium, *Hance in Ann. Sc. Nat.* 5me série, v. p. 239.

SHANTUNG: Chefoo (*Forbes*!); KIANGSU: Shanghai (*Carles*!); CHEKIANG: Ningpo (*Faber*!); FOKIEN (*Gregory*, hb. *Hance*, 1269!); FORMOSA (*Oldham*, 419, 421! *Swinhoe*!); HUPEH: Patung district (*A. Henry*!); KWANGTUNG: around Canton (*Sampson*, hb. *Hance*, 7497!), Lofaushan (*Ford*!); EAST COREA (*Perry*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan and Mandshuria.

51. **Polygonum serrulatum,** *Lagasca, Nov. Gen. et Sp.* p. 14, n. 181; *Meisn. in DC. Prodr.* xiv. p. 110; *Hook. f. Fl. Brit. Ind.* v. p. 38; *Hance in Journ. Linn. Soc.* xiii. p. 119, et *in Journ. Bot.* 1879, p. 14.

Polygonum Donii, *Meisn. Monogr. Polyg.* p. 72, excl. synon. teste *Hook. f. loc. cit.*

SHANTUNG to SZECHUEN, KWANGTUNG, HONGKONG, FORMOSA, and the LUCHU ARCHIPELAGO, apparently very common, and very variable in the length of the bristles terminating the stipules and the bracts. Mus. Brit.; Herb. Kew.

In the 'Flora of British India' the distribution given is South Europe, Asia, Africa, America, and Australia.

Chinese specimens which we regard as belonging to this species (apart from the question whether *P. Posumbu*, Hamilt., and *P. flaccidum*, Meisn., be the same species) have been named *P. Donii*, Meisn., *P. barbatum*, Linn., *P. Blumei*, Meisn., and *P. japonicum*, Meisn., showing how great is the uncertainty concerning these species or varieties.

52. **Polygonum sibiricum,** *Laxm. in Nov. Act. Acad. Petrop.* xviii. 1773, p. 531, t. 7. f. 2; *Meisn. in DC. Prodr.* xiv. p. 139; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 249.

Polygonum hastatum, *Murr. in Nov. Comm. Goett.* v. 1774, p. 37, t. 6, fide *Ledeb. Fl. Alt.* ii. p. 80, et *Ic. Pl. Ross.* t. 361; *Bunge, Pl. Enum. Chin. Bor.* p. 57; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 9.

CHIHLI: Peking (*Bretschneider*! *Bunge*! *Bullock*!); SHINGKING: Talienhwan (*Swinhoe*, hb. *Hance*, 6537!), Chienshan (*Ross*!); SHANTUNG: Chefoo (*Everard*! *Perry*!); KANSUH (ex *Kanitz*). Mus. Brit.; Herb. Kew.

North-west India, Siberia, and Mandshuria.

53. **Polygonum stagninum,** *Hamilt.*; *Meisn. in Wall. Pl. As. Rar.* iii. p. 56; *DC. Prodr.* xiv. p. 104; *Hook. f. Fl. Brit. Ind.* v. p. 37.

Polygonum conspersum, *Meisn. in Wall. Pl. As. Rar.* iii. p. 56; *Miq. in Journ. de Bot. Néerl.* i. p. 96.

KWANGTUNG (*Krone* ex *Miquel*).

Throughout tropical India and Burma.

54. **Polygonum strigosum,** *R. Br. Prodr. Fl. Nov. Holl.* p. 420; *Meisn. in DC. Prodr.* xiv. p. 134; *Hook. f. Fl. Brit. Ind.* v. p. 47; *Franchet, Pl. David.* p. 256; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 476.

KIANGSI: Kiukiang (*David* ex *Franchet*); HONGKONG (*Ford*, 4!). Herb. Kew.

India, Malaya, and Ceylon.

55. **Polygonum subcordatum,** *Miq. in Journ. de Bot. Néerl.* i. p. 95.

KWANGTUNG (*Krone* ex *Miquel*).

Miquel states that it is a rather common species, near *P. orientale*, Linn., but differing, among other things, in the shape of the leaves, especially in the more or less cordate base. The shape of the leaf of *P. orientale* is very variable, ranging from cuneate to cordate at the base; therefore it is almost certain that *P. subcordatum*, Miq., is the same species.

56. **Polygonum suffultum,** *Maxim. in Mél. Biol.* ix. p. 616; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 475.

Polygonum Bistorta, β. minus, *Franch. et Savat. Enum.* i. p. 398, non *Meisn.*

CHEKIANG: Tientai mountains at 3000 ft. (*Faber*!); HUPEH: Patung district (*A. Henry*!). Mus. Brit.; Herb. Kew.

Japan.

57. **Polygonum tataricum,** *Linn. Sp. Pl.* ed. 1, p. 364; *Meisn.*

Monogr. pp. 62 et 108, t. 4. 8; *Lour. Fl. Cochinch.* p. 242; *Bretschn. Early Res.* p. 170; *DC. Orig. Pl. Cult.* ed. 3, p. 281.

Fagopyrum tataricum, *Gærtn. Fruct.* ii. p. 182, t. 119. f. 6; *Meisn. in DC. Prodr.* xiv. p. 144; *Hook. f. Pl. Brit. Ind.* v. p. 55; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Kanitz, Bot. Res. Szech. Centr. As. Exped.* p. 8.

Polygonum Sinarum, *Desv.* ex *Meisn. in DC. Prodr.* xiv. p. 144.

CHIHLI: Peking (ex *Maximowicz*); HUPEH: Ichang, cultivated, and Changyang (*A. Henry*!); YUNNAN (*Anderson*!); KANSUH (ex *Kanitz*). Mus. Brit.; Herb. Kew.

Central Asia, and cultivated and more or less naturalized in Eastern Europe and North India.

Dr. A. Henry notes that it is the "Bitter Buckwheat" of China, and *Polygonum Fagopyrum*, Linn., the "Sweet Buckwheat."

58. **Polygonum Thunbergii,** *Sieb. et Zucc. Fl. Jap.* ii. p. 84; *Meisn. in DC. Prodr.* xiv. p. 132; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 475 (varietates plures); *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 249.

Polygonum hastato-trilobum, *Meisn. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 62; *Franch. et Savat. Enum. Pl. Jap.* i. p. 399.

Polygonum Maackianum, *Regel, Tent. Fl. Ussur.* p. 138, t. 10.

Polygonum stoloniferum, *F. Schmidt, Reise in Amurl.* p. 168.

Polygonum Pteropus, *Hance in Journ. Bot.* 1869, p. 167.

CHIHLI: Peking (*Bretschneider*!); SHINGKING (*James*!); SHANTUNG: Chefoo and other localities (*Forbes*! *Maingay*!); CHEKIANG: Ningpo (*Oldham*! *Faber*!), FORMOSA (*Oldham*, 431!); HUPEH: Patung district and Chienshih (*A. Henry*!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

59. **Polygonum tinctorium,** *Lour. Fl. Cochinch.* p. 241; *Meisn. in DC. Prodr.* xiv. p. 102; *Franch. et Savat. Enum. Pl. Jap.* i. p. 394; *Bretschn. Early Res.* p. 169; *Franchet, in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 248; *Joly, Études sur . . . .* Polyg. tinctorium, t. 1; *Bretschn. Notes on Bot. Quest. Exp. Trade of China,* p. 8; *Miq. in Journ. de Bot. Néerl.* i. p. 96.

SHINGKING: Kaichow to Kinchow, cultivated for blue dye (*Ross*!); SHANTUNG (*Maingay*!); SZECHUEN: Fu city (*Faber*!); KWANGTUNG: roadsides at Suheang (ex *Miquel*); COREA: near Soul (*Carles*!). Mus. Brit.; Herb. Kew.

Japan; commonly cultivated, and perhaps originally introduced from China, in the opinion of Joly (see Ann. Mus. Bot. Lugd.-Bat. ii. p. 212). Bretschneider (*loc. sup. cit.*) states that he has little doubt that the "Indigo" exported from Mandshuria is yielded by this plant. This was confirmed in 1879 by Mr. A. Davenport, then H.B.M. Vice-Consul at Shanghai, who sent seeds to Kew, with an account of the mode of cultivating the plant.

60. **Polygonum virginianum,** *Linn. Sp. Pl.* ed. 1, p. 360; *Meisn. Monogr. Polyg.* p. 81, t. 1. figg. 27–29, t. 3. N, et *in DC. Prodr.* xiv. p. 112; *A. Gray, Man. Bot. N. U.S.* ed. 6 (*Watson & Coulter*), p. 442; *Hook. f. Fl. Brit. Ind.* v. p. 31.

Polygonum filiforme, *Thunb. Fl. Jap.* p. 163; *Meisn. in DC. Prodr.* xiv. p. 122, et *in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 59; *Franch. et Savat. Enum. Pl. Jap.* i. p. 396, et ii. p. 478; *Hance in Journ. Bot.* 1883, p. 355; *Franchet, Pl. David.* p. 254.

KIANGSU: Shanghai (*Carles*!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Amoy interior (*Swinhoe*!); HUPEH: Patung district, Nanto, and mountains to the northward (*A. Henry*!); SZECHUEN: mount Omei at 3500 ft. (*Faber*!); KWANGTUNG: Lofaushan (*Faber*! *Ford*!). Mus. Brit.; Herb. Kew.

North India, from Kashmir eastward, and in Japan; also common in eastern North America.

61. **Polygonum viscosum,** *Hamilt. in D. Don, Prodr. Fl. Nep.* p. 71; *Meisn. in DC. Prodr.* xiv. p. 102; *Benth. Fl. Hongk.* p. 287; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 240; *Hook. f. Fl. Brit. Ind.* v. p. 36; *Miq. in Journ. de Bot. Néerl.* i. p. 96.

SHINGKING: Kaichow to Kinchow (*Ross*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*!); HONGKONG (*Seemann*!); KWANGTUNG (ex *Miquel*). Herb. Kew.

Eastern India.

62. **Polygonum viviparum,** *Linn. Sp. Pl.* ed. 1, p. 360; *DC. Prodr.* xiv. p. 124; *Hook. f. Fl. Brit. Ind.* v. p. 31; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 47.

CHIHLI: Pohuashan (*Bretschneider*!); SHANSI: Siaowutaishan (*Hancock* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

Mountainous and arctic regions all around the northern hemisphere.

63. **Polygonum** sp., sectionis *Persicariæ*? caules aculeis retrorsis parce instructi.

SHINGKING: Moukden to Laoling (*Ross*!). Herb. Kew.

This specimen, although imperfect, is included because it looks so much like a prickly condition of *P. barbatum*, Linn., or one of that group. The inflorescence is quite like that of *P. lapathifolium*, Linn., but all the flowers are galled.

1. **Rheum Emodi,** *Wall. ex Meisn. in Wall. Pl. As. Rar.* iii. p. 65, et *in DC. Prodr.* xiv. p. 35, excl. syn.; *Hook. f. Fl. Brit. Ind.* v. p. 56; *Franchet, Pl. David.* p. 252; *Bot. Mag.* t. 3508.

CHIHLI: Pohuashan (*David* ex *Franchet*).

Himalayas at high altitudes in Sikkim and Nepal.

Hance (Journ. Bot. 1875, p. 134) doubtingly refers David's plant to *Rheum Rhaponticum*, Linn.

2. **Rheum officinale,** *Baill. in Mém. de l'Assoc. Franç. pour l'Avancem. des Sc., Bordeaux*, 1872, p. 514, t. 10, et *Adansonia*, x. p. 246; *Journ. Bot.* 1872, p. 379; *Flück. et Hanb. Pharmacogr.* p. 442; *Bentl. et Trim. Med. Pl.* t. 213; *Rev. Hort.* 1874, p. 93, cum fig. xylogr. 13; *Bot. Mag.* t. 6135; *A. Henry in Kew Bulletin*, 1889, p. 226.

HUPEH: wild on the mountains bounding the Fang and Hsingshan districts, at 7000 to 10,000 feet, and cultivated in the Patung district (*A. Henry*!). Mus. Brit.; Herb. Kew.

Tibet.

Dr. Henry describes this as growing in a wild state, six feet or more in height, and he adds that the root is of a bright yellow, and in large specimens three or four feet long, and three or four inches in diameter at the thickest end. He further states "that it is the source of the Rhubarb exported abroad, and it is said to be prepared by merely sun-drying—holes being made in the root with box-wood pins."

Respecting the cultivated specimens from the Patung district, collected before he met with the plant in a wild state, Dr. Henry says:—"*Ta-huang*, cultivated rhubarb, originally brought from Szechuen."

This is the only kind of Rhubarb we have seen from China Proper, and the specimens are excellent, so that there can be no doubt of their identity with *Rheum officinale*, Baill. Dr. Baillon, writing towards the end of last year, had seen no wild specimens.

In the collection of living Rhubarbs at Kew is a plant from Mr. G. B. Corner, Honorary Secretary of the Public Garden

Committee of Shanghai, said to be from the borders of Tibet, and strongly resembling, in foliage, at least, *R. officinale*, Baill. There is also a plant of the Cochinchina Rhubarb, introduced by Mr. Pierre, the Director of the Botanic Garden at Saigon, which is either the same or a closely allied species. The last is *R. Pichonii*, Pierre, of which we have found no description.

3. **Rheum palmatum,** *Linn. Sp. Pl.* ed. 2, p. 531; *Meisn. in DC. Prodr.* xiv. p. 34; *Hope in Phil. Trans.* iv. 1765, p. 290, tt. 12 et 13; *Pall. Fl. Ross.* ii. 1, tt. 22 et 23; *Hayne, Arzneigew.* xii. t. 10; *Bentl. et Trim. Med. Pl.* t. 214; *Maxim. in Regel's Gartenflora*, xxiv. p. 3, t. 819 (var. tanguticum); *Trans. Edinb. Bot. Soc.* xiii. t. 14; *Bretschn. Early Res.* p. 107.

KANSUH: western alpine regions around Koko-nor (*Przewalski* ex *Maximowicz*).

The late Mr. C. J. Maximowicz, in a letter to Professor D. Oliver, dated St. Petersburg, 4 Aug., 1889, states that the Rhubarb cultivated for the drug in Western Kansuh is certainly *Rheum palmatum*, Linn. The last time Przewalski took roots of it to St. Petersburg was in 1881, Mr. Maximowicz believed; "and they were distributed to chemists and medical men there to be tested, and were found to agree with the old Moscow Rhubarb in quantity of effective matter and action on the stomach." Plants were also raised from seed, and yielded at first a drug of fair quality, but the roots soon deteriorated in the unfavourable climate of St. Petersburg. From the evidence before us it seems clear that two or three species of *Rheum* yield the drug equally excellent in quality, the quality depending primarily on the climate where the plant grows or is cultivated. In the communication from which we have already quoted, Mr. Maximowicz states that in the elevated dry steppes of Dahuria *Rheum Rhaponticum*, Linn., is found equal in quality to and used like the true Chinese Rhubarb.

He further states that a kind of Rhubarb grown in Eastern Kansuh, of which Potanin collected only leaves, is different from that in Western Kansuh; but he was unable to determine the species, though it might be *R. officinale*, Baill., or possibly the *R. Pichonii*, Pierre.

4. **Rheum pumilum,** *Maxim. in Mél. Biol.* x. p. 686.

KANSUH: western alpine region (*Przewalski*!). Herb. Kew.

5. **Rheum spiciforme,** *Royle, Ill. Himal. Pl.* p. 318, t. 78; *Meisn. in DC. Prodr.* xiv. p. 36; *Hook. f. Fl. Brit. Ind.* v. p. 55.

KANSUH (*Przewalski* !). Herb. Kew.

Afghanistan and North India.

6. **Rheum uninerve,** *Maxim.*? *Hance in Journ. Bot.* 1883, p. 355; *Maxim. in Mél. Biol.* x. p. 685.

KANSUH: Koko-nor (*Mesny* ex *Hance* !). Mus. Brit.

The original plant is from Southern Mongolia.

[*Rheum Barbarum,* Lour. (Fl. Cochinch. p. 255) = *R. Rhabarbarum,* Linn. = *R. undulatum,* Linn. (DC. Prodr. xiv. p. 33), a native of Western Siberia, has been erroneously, as it appears, recorded as Chinese. *Rheum compactum,* Linn., another Siberian species, was supposed by Linnæus to be Chinese.]

1. **Rumex Acetosa,** *Linn. Sp. Pl.* ed. 1, p. 337; *Meisn. in DC. Prodr.* xiv. p. 63; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 385; *Franchet, Pl. David.* p. 253, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 248.

SHINGKING; Chienshan (*Ross* !); KIANGSU: Shanghai (*Faber* !); FORMOSA (*Oldham,* 437 !); HUPEH: Ichang and Patung district (*A. Henry* !); LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit.; Herb. Kew.

Europe, North Asia, and North America, and naturalized elsewhere.

2. **Rumex Acetosella,** *Linn. Sp. Pl.* ed. 1, p. 338: *Meisn. in DC. Prodr.* xiv. p. 64; *Franch. et Savat. Enum. Pl. Jap.* i. p. 393; *Hook. f. Fl. Brit. Ind.* v. p. 61.

SHINGKING: between Moukden and Tungcheshien (*James* !). Herb. Kew.

Europe, North Africa, and North Asia; and naturalized in many other countries.

3. **Rumex aquaticus,** *Linn. Sp. Pl.* ed. 1, p. 336; *Meisn. in DC. Prodr.* xiv. p. 42; *Boiss. Fl. Or.* iv. p. 1008?

HUPEH: Nanto, cult. (*A. Henry* !). Herb. Kew.

Scandinavia and North of France to Russia and Siberia.

The Chinese specimen is quite young, and may belong to *R. domesticus,* Hartm. It is cultivated for the sake of its root, which is used as a drug according to Dr. Henry.

4. **Rumex crispus,** *Linn. Sp. Pl.* ed. 1, p. 335; *Meisn. in DC. Prodr.* xiv. p. 44; *Benth. Fl. Hongk.* p. 286; *Hance in Journ. Linn. Soc.* xiii. p. 86; *Franch. et Savat. Enum. Pl. Jap.* i. p. 392.

Rumex japonicus, *Meisn. in Ann. Mus. Lugd.-Bat.* ii. p. 56; *Franch. et Savat. Enum. Pl. Jap.* i. p. 392.

Rumex Fischeri, *Reichb. Ic. Pl. Rar.* iv. p. 58; *Meisn. loc. cit.*; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 248.

Rumex Regelii, *F. Schmidt, Reisen in Amurl.* p. 167.

Rumex Luederi, *Muenter in Actes du Congr. Intern. de Bot. et Hort., Amsterdam,* 1877, p. 188, ex descript.

SHINGKING: various localities (*Ross*! *Webster*! *Birnie*!); CHUSAN (*Cantor*!); FOKIEN: Amoy (*Hance*, 1416!); FORMOSA: Tamsui (*Oldham*, 439!); HUPEH: Ichang (*A. Henry*, 508!); SZECHUEN: Chungking (*Faber*!); HONGKONG (*Champion*). Mus. Brit.; Herb. Kew.

Europe and North Africa through Central Asia to Japan, and naturalized in many other countries.

5. **Rumex dentatus,** *Linn. Mant.* p. 226; *Campdera Monogr.* pp. 64 et 81; *Meisn. in DC. Prodr.* xiv. p. 56; *Hook. f. Fl. Brit. Ind.* v. p. 59.

CHEKIANG: Ningpo (*Oldham*!); FORMOSA: Tamsui (*Oldham*, 438, 440!), Takow (*Playfair*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 584, 1001, 1364!); COREA: Port Chusan (*Wilford*!). Mus. Brit.; Herb. Kew.

Europe, through Central Asia and India to Japan.

Japanese specimens named *R. pulcher*, Linn., by Mr. Franchet and Mr. Maximowicz we think may be this species; but without very complete specimens the two species are sometimes difficult to distinguish. Dr. A. Henry's 4070 from the Patung district is probably *R. dentatus*, Linn., but it is in an early flowering stage. His Chinese collector called it Ta Huang (rhubarb), and stated that it is the kind used as a cooling medicine, that it is wild on the borders of fields, and that it is sometimes cultivated.

6. **Rumex Hydrolapathum,** *Hudson, Fl. Angl.* ed. 2, p. 154; *Meisn. in DC. Prodr.* xiv. p. 47; *Ledeb. Fl. Ross.* iii. p. 507?

Rumex longifolius, *Kunth, Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476?

CHIHLI: Peking (*Bushell*!). Herb. Kew.

The specimen is in young flower, but so far as it goes it is very much like this species, which, however, we do not find recorded from Asia.

7. **Rumex maritimus,** *Linn. Sp. Pl.* ed. 1, p. 335; *Meisn. in DC. Prodr.* xiv. p. 59; *Hook. f. Fl. Brit. Ind.* v. p. 59.

Rumex chinensis, *Campdera Monogr.* pp. 63 et 76; *Hance in Journ. Linn. Soc.* xiii. p. 117; *Meisn. in DC. Prodr.* xiv. p. 60; *Hook. et Arn. Bot. Beech. Voy.* p. 208.

Rumex Loureirii, *Campdera Monogr.* p. 142.

Rumex crispus, *Lour. Fl. Cochinch.* p. 216, non *Linn.*

Rumex denticulatus, *Campdera Monogr.* p. 143.

HUPEH: Ichang (*A. Henry*!); KWANGTUNG: Macao (*Callery*!); Whampoa (*Hance*, 819!); HAINAN (*A. Henry*!). Mus. Brit.; Herb. Kew.

Europe, North Africa, Asia, and North and South America.

Rumex persicarioides, Maxim. (Ind. Fl. Pek. in Prim. Fl. Amur. p. 476), may belong here.

8. **Rumex Marschallianus,** *Reichb. Pl. Crit.* iv. p. 58, et vi. p. 13, t. 516; *Ledeb. Fl. Ross.* iii. p. 499; *Franchet, Pl. David.* p. 253.

Rumex ægyptiacus, *Bieb. Fl. Taur.-Cauc.* p. 290, vix alior.

CHIHLI: Peking (*David*, 2980, ex *Franchet*).

Europe and Siberia.

9. **Rumex nepalensis,** *Spreng. Syst. Veg.* ii. p. 159; *Meisn. in DC. Prodr.* xiv. p. 55; *Boiss. Fl. Or.* iv. p. 1011; *Hook. f. Fl. Brit. Ind.* v. p. 60; *Wight, Ic. Pl. Ind. Or.* t. 1810.

Rumex hamatus, *Trevir. in Nov. Act. Nat. Cur.* xiii. p. 174.

Rumex ramulosus, *Meisn. in DC. Prodr.* xiv. p. 55.

KIANGSI: Kiukiang (*Faber*!). Herb. Kew.

Asia Minor eastward, throughout India, and also found in Java and South Africa.

10. **Rumex Patientia,** *Linn. Sp. Pl.* ed. 1, p. 333; *Meisn. in DC. Prodr.* xiv. p. 51; *Franchet, Fl. David.* p. 252.

CHIHLI: Jehol (*David* ex *Franchet*).

Western Europe to Persia.

11. **Rumex pulcher,** *Linn. Sp. Pl.* ed. 1, p. 336; *Meisn. in DC. Prodr.* xiv. p. 58; *Franchet, Pl. David.* p. 252.

CHEKIANG: Ningpo (*Savatier* ex *Franchet* in litt.); SOUTHERN SHENSI (*David* ex *Franchet*).

Europe, North Africa and Syria, Asia Minor to the Caucasus.

As observed under *R. dentatus*, Linn., we have seen neither Chinese nor Japanese specimens that we could refer with confidence to *R. pulcher*, Linn.

[*Muehlenbeckia platyclada*, Meisn., syn. *Coccoloba platyclada* (Bot. Mag. t. 5382), a native of the Solomon Islands, is recorded by Henriques (Bol. Soc. Brot. iii. p. 143) from Macao, where, however, it is doubtless an introduced plant.]

112. NEPENTHACEÆ.

1. **Nepenthes phyllamphora,** *Willd. Sp. Pl.* iv. p. 874; *Hook. f. in DC. Prodr.* xvii. p. 97, et *Fl. Brit. Ind.* v. p. 69.

Phyllamphora mirabilis, *Lour. Fl. Cochinch.* p. 606.

KWANGTUNG: various localities (*Millett*! *Vachell*! *Delavay*, hb. *Hance*, 2400! *Ford*!). Mus. Brit.; Herb. Kew.

Malaya and Cochinchina to New Guinea and the Louisiade Archipelago.

113. ARISTOLOCHIACEÆ.

1. **Asarum caudigerum,** *Hance in Journ. Bot.* 1881, p. 142; *Hemsl. in Gard. Chron.* 3rd series, vii. p. 422; *Bot. Mag.* t. 7126.

KWANGTUNG: along the East river (*Gerlach*, hb. *Hance*, 21366!), North river (*Ford's native collector*!). Mus. Brit.; Herb. Kew.

2. **Asarum Forbesii,** *Maxim. in Mél. Biol.* xii. p. 530.

Asarum Blumei, *Hance in Journ. Bot.* 1882, p. 293, non *Duchartre*.

CHEKIANG: Meichi, south of lake Tahoo (*Forbes & Carles*!). Mus. Brit.; Herb. Kew.

3. **Asarum geophilum,** *Hemsl.*

Herba perennis, rhizomate repente, foliis 2–3 poll. supra terram elevatis. *Folia* subcarnosa, breviter petiolata, rotundato-cordata (lobis sæpius obtegentibus), usque ad 4 poll. diametro, conspicue laxeque albo-venosa, simul plus minusve bullata, ciliolata, supra atro-virida, nitida, glabra vel pilis albis parcissime instructa, subtus pallidiora, paullo hirsutiora; petiolus crassus, carnosus, fere teres, appresse albo-pilosulus. *Flores* solitarii, brevissime pedunculati, supra terram sessiles, pedunculo subite recurvo; perianthium circiter 1 poll. diametro, brevissime tubulosum, subæqualiter trilobatum (lobo antico majore), lobis rotun-

datis ecaudatis 2 posticis demum arcte reflexis, intus atro-viride vel brunneum, albo-maculatum, albo-marginatum, intus extusque pilis crassis plus minusve vestitum, extus purpureo-viride; andrœcium cum gynæcio normale, staminibus supra pistillum conniventibus.—*Hemsl. in Gard. Chron.* 3rd series, vii. p. 422; *Bot. Mag.* t. 7168.

KWANGTUNG: along the North river (*Ford's native collector* !). Herb. Kew.

This pretty species is in cultivation at Kew. The flowers lie on the top of the ground.

4. **Asarum himalaicum**, *Hook. f. et T. Thoms. ex Duchartre in DC. Prodr.* xv. 1, p. 424; *Hook. f. Fl. Brit. Ind.* v. p. 72.

HUPEH: South Patung (*A. Henry*, 5433 !). Herb. Kew.

Sikkim Himalaya at altitudes of 9000 to 11,000 feet, and the only species recorded from India.

"Hsi-Hsin—root is a valued Chinese drug."—*Dr. A. Henry.*

5. **Asarum macranthum**, *Hook. f. Bot. Mag.* t. 7022; *Hemsl. in Gard. Chron.* 3rd series, vii. p. 421.

FORMOSA: Kelung (*Ford* !), without locality (*Oldham*, 465 !). Herb. Kew.

A specimen without flowers from "Amoy interior," collected by Swinhoe, may belong to this species.

Mr. Maximowicz (Mél. Biol. viii. p. 404) refers the specimen in the St. Petersburg herbarium bearing Oldham's 465 to *A. Thunbergii*, A. Br., but there can be no doubt respecting the specimen in the Kew Herbarium being different.

6. **Asarum maximum**, *Hemsl.*

Herba robusta, fere undique glabra, rhizomate repente. *Folia* ampla, longe petiolata, cum petiolo crasso interdum saltem sesquipedalia, crassa, subcarnosa, late cordata vel hastato-cordata, absque petiolo interdum usque ad 8 poll. longa, obtusa vel vix acuta, lobis latis rotundatis divergentibus, venis primariis paucis crassis; folia pauca secundaria minora, reniformia. *Flores* ut videtur erecti, breviter pedunculati (extus carnei, intus velutini, nigro-purpurei, lobis basi stria unica transversa albida instructis), 2–2½ poll. diametro; perianthium subæqualiter trilobatum, lobis latis rotundatis planis divergentibus, tubo a basi gradatim expanso intus interrupte transversim multiplicato; antheræ subsessiles, uniformes, minute appendiculatæ, styli stamina superantes, crassissimi, minute papillosi, longe bicornuti vel bifidi, stigmate dorsali brevi oblongo.—*Hemsl. in Gard. Chron.* 3rd series, vii. p. 422.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3369!). Mus. Brit.; Herb. Kew.

"Occurs in glens about Ichang Gorge on sides of cliffs, always some distance up. It is the 'Ma-ti-hsiang' (*i. e.* horse-hoof fragrance) of the Chinese, and the root is used in medicine."—*Dr. A. Henry.*

7. **Asarum pulchellum**, *Hemsl.*

Herba fere undique pilis elongatis multicellularibus moniliformibus pulchellis vestita, rhizomate repente, caulibus vel ramulis brevibus adscendentibus sæpius bifoliatis unifloris. *Folia* papyracea, longe petiolata, ovato-cordata vel rotundato-cordata, absque petiolo 2–3 poll. diametro, obtusa vel subacuta, præcipue subtus pilosa, venis primariis paucis inconspicuis; petiolus crassus, dense pilosus, usque ad 6 poll. longus. *Flores* pulchelli, extus atro-rubri intus rosei (teste *Henry*), parvi, circiter 6 lineas longi, breviter graciliterque pedunculati; perianthium pilosum, subcarnosum, fere ad basin æqualiter trilobatum, medio constrictum, lobis rotundatis leviter undulatis; stamina uniformia, stylum subæquantia, filamentis brevibus crassis, antheris breviter appendiculatis omnibus extrorsis; styli ad apicem connati, stigmate disciformi.—*Hemsl. in Gard. Chron.* 3rd series, vii. p. 422.

HUPEH: among stones in one spot in Antelope glen, Ichang (*A. Henry*, 7800!). Herb. Kew.

8. **Asarum Sieboldi**, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 134; *Franch. et Savat. Enum. Pl. Jap.* i. p. 417; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 386.

Asarum heterotropoides, *Fr. Schmidt, Reisen in Amurl. und Ins. Sach.* p. 171.

SHINGKING: Kwandien (*Ross*!), Laoling (*Webster*!); COREA: Soul mountains (*Carles*!); HUPEH: South Patung (*A. Henry*, 5392 A!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

"Hsi-Hsin—root is valued as a drug."—*Dr. A. Henry.* In the province of Shingking, according to Ross and Webster, it is called wild or sham ginseng.

1. **Saruma Henryi**, *Oliver in Hook. Ic. Pl.* t. 1895; *Hemsl. in Gard. Chron.* 3rd series, vii. p. 422.

HUPEH: Fang (*A. Henry*, 6676, 6683 !). Mus. Brit.; Herb. Kew.

1. **Aristolochia contorta,** *Bunge, Enum. Pl. Chin. Bor.* p. 58; *Duchartre in DC. Prodr.* xv. 1, p. 488; *Maxim. Fl. Amur.* pp. 238 et 476; *Hance in Journ. Bot.* 1873, p. 76; *Franchet, Pl. David.* p. 257.

CHIHLI: near Peking (*Bunge*! *Bushell*! *Bretschneider*!); HUPEH: Nanto and mountains to the northward (*A. Henry*, 4487 !). Herb. Kew.

Mandshuria.

2. **Aristolochia debilis,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 683; *Duchartre in DC. Prodr.* xv. 1, p. 483; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 135; *Franch. et Savat. Enum. Pl. Jap.* i. p. 420.

Aristolochia recurvilabra, *Hance in Journ. Bot.* 1873, p. 75 cum ic. xylogr., et 1880, p. 301; *Franchet, Pl. David.* p. 258.

Aristolochia longa, *Thunb. Fl. Jap.* p. 144, non *Linn.*

KIANGSI: Kiukiang (*Shearer*!); HUPEH: Nanto and mountains to the northward (*A. Henry*, 4649 !); HUNAN (*Bullock*!). Mus. Brit.; Herb. Kew.

Japan.

There is a little doubt about the specimens from Nanto. They are in fruit and the capsule agrees very well with the partial description given of it by Mr. Maximowicz, but the seeds are apparently nowhere described. In these specimens the seeds are concavo-convex and muriculate.

This plant yields the "Green Putchuk," a drug enjoying a great reputation in China as an antidote to snake-bites &c. See Hanbury, 'Science Papers,' p. 189, and Hance in Journ. Bot. 1873, p. 75.

3. **Aristolochia Fordiana,** *Hemsl. in Journ. Bot.* 1885, p. 286.

KWANGTUNG: Taiwushan opposite Hongkong (*Westland*!). Herb. Kew.

✓ 4. **Aristolochia (§ Siphisia) heterophylla,** *Hemsl.*, n. sp.

Frutex vel herba lignescens, nunc supra frutices scandens vel volubilis, nunc supra rupes repens, primum fere undique pubescens, caulibus graciliusculis sæpius obscure angulatis vel sulcatis. *Folia* longe petiolata, papyracea, nunc vere cordiformia, nunc oblongo-cordata, nunc cordato-trilobata lobis lateralibus semiorbicularibus, absque petiolo 2–6 poll. longa, supra scaberula, subtus pubescentia vel puberula, demum conspicue reticulato-venosa et interdum gla-

brescentia; petiolus graciliusculus, 1–3-pollicaris. *Flores* mediocres, pubescentes vel villosuli, purpureo-virides simul punctati, vel albi (fide *Henry*), axillares, solitarii, longe pedunculati, pedunculo medio bractea cordiformia sessilia amplectenti instructo; perianthium hirsutum, arctissime refractum, circiter sesquipollicare, tubo infra flexum leviter inflato, intus omnino nudo glabroque, limbo subæqualiter trilobato patenti 7–8 lineas diametro, lobis rotundato-deltoideis, supra crebre papillosis, ore amplo aperto carnoso-marginato, fauce nuda; ovarium 6-loculare, stylo crasso-carnoso bifido (an semper?), antheris cum columna stylina confluentibus. *Capsula* oblongo-cylindrica, 2–3 poll. longa, glabra vel glabrescens, inconspicue 6-costata, ab apice basin versus septicide 6-valvis; semina horizontalia, compressa, obovato-triangularia, facie superiore profunde concava simul medio rhaphe carnosa percursa, facie inferiore leviter convexa lævi.

HUPEH: Fang, Tunghu, Hsingshang, Ichang, Patung and neighbourhood (*A. Henry*, 3493, 4665, 6417, 6417 A, 6490!). Herb. Kew.

In foliage this resembles *A. Kæmpferi*, Willd., presenting similar variations; but the narrower and somewhat smaller perianth differs in the very sharply bent tube, and in the equally 3-lobed limb, similar to that of the North-American *A. Sipho*, Ait. It also differs in the longer indistinctly ribbed capsule.

5. **Aristolochia Kæmpferi**, *Willd. Sp. Pl.* iv. p. 152; *Duch. in DC. Prodr.* xv. 1, p. 439; *Franch. et Savat. Enum. Pl. Jap.* i. p. 419; *Hance in Journ. Bot.* 1878, p. 233.

KIANGSU: Chinkiang (*Hay*!); LUCHU ARCHIPELAGO (*Wright*! *Carpenter*!). Herb. Kew.

Japan.

6. **Aristolochia longifolia,** *Champ. in Hook. Kew Journ. Bot.* vi. p. 116; *Benth. Fl. Hongk.* p. 333; *Duchartre in DC. Prodr.* xv. 1, p. 438; *Hance in Journ. Bot.* 1878, p. 289: *Bot. Mag.* t. 6884.

HONGKONG (*Champion*! *Ford*! *Hance*!). Mus. Brit.; Herb. Kew.

7. **Aristolochia mollissima**, *Hance in Journ. Bot.* 1879, p. 300.

KIANGSU: Fengwangshan (*Forbes*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 779, 4144, 4144 A!). Mus. Brit.; Herb. Kew.

8. **Aristolochia Sinarum**, *Lindl. Gard. Chron.* 1859, p. 708; *Duchartre in DC. Prodr.* xv. 1, p. 497.

CHINA: without locality (*Fortune*).

So far as one can judge from the brief description, this is the same as *A. debilis*, Sieb. et Zucc.

9. **Aristolochia tagala**, *Cham. et Schl. in Linnæa*, vii. (1832), p. 207, t. 5. f. 3; *Duchartre in DC. Prodr.* xv. 1, p. 480.

Aristolochia Roxburghiana, *Kl. in Monatsb. Berl. Akad.* 1859, p. 596; *Duchartre in DC. Prodr.* xv. 1, p. 480; *Hook. f. Fl. Brit. Ind.* v. p. 75.

Aristolochia acuminata, *Roxb. Fl. Ind.* iii. p. 489, non *Lam.*; *Wight, Ic. Pl. Ind. Or.* t. 771; *Miq. Fl. Ind. Bat.* i. p. 1066.

KWANGTUNG: without locality (*Ford*!). Herb. Kew.

North and South India, Ceylon and Malaya to the Philippine Islands.

10. **Aristolochia Westlandi**, *Hemsl. in Journ. Bot.* 1885, p. 286; *Bot. Mag.* t. 7011.

KWANGTUNG: Taimo mountain opposite Hongkong (*Westland*!). Herb. Kew.

114. PIPERACEÆ.

1. **Saururus Loureiri**, *Decne. in Ann. Sc. Nat.* 3^{me} série, iii. p. 102; *C. DC. in DC. Prodr.* xvi. 1, p. 239; *Hance in Journ. Bot.* 1870, p. 276, et 1878, p. 232; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 54; *Benth. et Hook. Gen. Pl.* iii. p. 128.

Spathium chinense, *Lour. Fl. Cochinch.* p. 217.

Saururus chinensis, *Baill. Adansonia*, x. p. 71, et *Hist. Pl.* iii. p. 467.

Saururus cernuus, *Thunb. Fl. Jap.* p. 154; *Hook. et Arn. Bot. Beech. Voy.* p. 216, non *Linn.*

Saururopsis chinensis, *Turcz. in Bull. Soc. Nat. Mosc.* xxi. 1848, 1, p. 590; *C. DC. Prodr.* xvi. 1, p. 239.

Saururopsis Cumingii, *C. DC. in DC. Prodr.* xvi. 1, p. 239.

CHINA: without locality (*Millett*!); CHEKIANG: Ningpo (*Hancock*!); KIANGSI: Kiukiang (*Maries*!); FOKIEN: Amoy (*Fortune*, 102!); FORMOSA (*Wilford*, 508! *Oldham*, 463!); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: mount Omei (*Faber*!); KWANGTUNG (*Hance*, 10720! *Ford*!); HAINAN: (*A. Henry*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Philippine Islands and Japan.

1. **Gymnotheca chinensis,** *Decne. in Ann. Sc. Nat.* 3^{me} série, iii. p. 100, t. 5; *Benth. et Hook. Gen. Pl.* iii. p. 128, sub Houttuynia; *Hook. Ic. Pl.* xix. t. 1873.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 4180!); SZECHUEN: mount Omei at 3000 feet (*Faber*!); KWANGTUNG: without locality (*Ford*!). Herb. Kew.

1. **Houttuynia cordata,** *Thunb. Fl. Jap.* p. 234, t. 26; *C. DC. in DC. Prodr.* xvi. 1, p. 238; *Benth. Fl. Hongk.* p. 334; *Debeaux, Fl. Shangh.* p. 58; *Franchet, Pl. David.* p. 258; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 53; *Hook. f. Fl. Brit. Ind.* v. p. 78; *Bot. Mag.* t. 2731.

Polypara cochinchinensis, *Lour. Fl. Cochinch.* p. 61.

KIANGSU: Shanghai (*Maingay*!); CHEKIANG: Ningpo (*Hancock*!); FOKIEN: Amoy (*Fortune*, 106!); FORMOSA: Tamsui and other localities (*Wilford*, 557! *Oldham*, 464!); HUPEH: Ichang, Chienshih, Nanto and mountains to the northward (*A. Henry*!); SZECHUEN: common (*Faber*!); KWANGTUNG: Lofaushan (*Ford*!); HONGKONG (*Wright*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Northern and Eastern India, Siam, and Japan.

1. **Piper aurantiacum,** *Wall.*; *C. DC. in DC. Prodr.* xvi. 1, p. 357; *Hook. f. Fl. Brit. Ind.* v. p. 86?

Chavica Wallichii, *Miq. Syst. Pip.* p. 254, et *Illustr. Pip.* p. 38, t. 33?

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 3120, 3311, 3311 A, 3393!). Mus. Brit.; Herb. Kew.

Eastern India and Java.

The Chinese specimens have not been identified beyond question with the Indian species.

[*Piper Betle*, Linn., *P. longum*, Linn., and *P. nigrum*, Linn., are enumerated by Loureiro (Fl. Cochinch. pp. 29–32), and may be cultivated in South China.]

2. **Piper Chaba,** *Hunter in Asiatic Researches*, ix. p. 391, nec *Blume*, ex *Hook. f. Fl. Brit. Ind.* v. p. 83.

Piper Officinarum, *C. DC. in DC. Prodr.* xvi. 1, p. 356.

Chavica Officinarum, *Miq. Syst. Pip.* p. 256, et *Illustr. Pip.* p. 39, t. 34.

CHINA: without locality (*Millett*!). Herb. Kew.

Commonly cultivated in India and Malaya, but uncertain where it is indigenous.

3. **Piper chinense,** *Miq. in Hook. Lond. Journ. Bot.* iv. p. 439; *C. DC. in DC. Prodr.* xvi. 1, p. 375; *Maxim. in Mél. Biol.* xii. p. 531.

CHINA: without locality (*Millett*!). Herb. Kew.

4. **Piper Futokadsura,** *Sieb. in Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 455; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 139; *C. DC. in DC. Prodr.* xvi. 1, p. 346; *Franch. et Savat. Enum. Pl. Jap.* i. p. 443; *Maxim. in Mél. Biol.* xii. p. 532.

Piper arcuatum, var., *Miq. in Ann. Mus. Bot. Lugd.-Bat.* i. p. 135.

FORMOSA: Tamsui and Takow (*Oldham*, 468, 469! *Playfair*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

Oldham's 471, from Formosa, may also belong to this species.

5. **Piper** (§ **Eupiper** sensu *Benth. et Hook. f.*) **hainanense,** *Hemsl.*, n. sp., ex affinitate *P. philippini*.

Herba vel frutex nanus, racemosus, cinereus vel pruinosus, undique glaber, ramulis floriferis gracillimis striatis. *Folia* graciliter petiolata, coriacea, ovato-lanceolata, 3–4 poll. longa, acuminata, basi cuneata vel fere rotundata, sæpe leviter obliqua, undulata, 5–7-nervia, utrinque pallida, petiolo semipollicari. *Flores* unisexuales, dioici, spicis elongatis gracilibus pendulis oppositifoliis; spicæ ♂ usque ad 6 poll. longæ, sed sæpius breviores, densissimæ, bracteis peltatis stipitatis; stamina 4?; spicæ ♀ laxiusculæ; ovarium sessile, stigmate obscure 4-lobulato. *Bacca* immatura, oblonga, circiter 2½ lineas longa.

HAINAN: small plant in beds of streams (*B. C. Henry*, 53, comm. *Ford*!), without locality (*A. Henry*!). Herb. Kew.

6. **Piper Hancei,** *Maxim. in Mél. Biol.* xii. p. 533.

Chavica leptostachya, *Hance in Journ. Bot.* 1868, p. 301.

KWANGTUNG: on the trunk of a tree at the White Cloud monastery (*Sampson*, 822!), in woods at Tingushan (*Sampson*, hb. *Hance*, 13030!). Mus. Brit.; Herb. Kew.

7. **Piper puberulum,** *Maxim. in Mél. Biol.* xii. p. 532.

Chavica puberula, *Benth. Fl. Hongk.* p. 335.

Piper arcuatum, *Seem. Bot. Voy. 'Herald,'* p. 415, nec *Miq.*

Piper hongkongense, *C. DC. in DC. Prodr.* xvi. 1, p. 347, ex descript.

KWANGTUNG: Lantao Island (*Ford's native collector*!); HONGKONG (*Hance*! *Seemann*!). Mus. Brit.; Herb. Kew.

8. **Piper sarmentosum,** *Roxb. Fl. Ind.* i. p. 160; *C. DC. in DC. Prodr.* xvi. 1, p. 352; *Maxim. in Mél. Biol.* xii. p. 533.

Chavica sarmentosa, *Miq. Syst. Pip.* p. 242; *Benth. Fl. Hongk.* p. 335.

Piper fragile, *Benth. in Hook. Lond. Journ. Bot.* ii. p. 234; *C. DC. in DC. Prodr.* xvi. 1, p. 358 (species propria e Nova Guinea).

Chavica Benthamiana, *Miq. Syst. Pip.* p. 233.

Chavica Betle, *Seem. Bot. Voy. 'Herald,'* p. 415, nec *Miq.*

SOUTH CHINA (*Krone*, hb. *Hance*, 3886!); KWANGTUNG: Pakhoi (*Playfair*!); HONGKONG (*Hance*!); HAINAN (*A. Henry*!). Mus. Brit.; Herb. Kew.

Malay archipelago.

9. **Piper sinense,** *C. DC. in DC. Prodr.* xvi. 1, p. 361; *Maxim. in Mél. Biol.* xii. p. 532.

Chavica sinensis, *Champ. in Hook. Kew. Journ. Bot.* vi. p. 116; *Benth. Fl. Hongk.* p. 335.

HONGKONG (*Champion*! *Harland*! *Wilford*! *Hance*!). Mus. Brit.; Herb. Kew.

Piper, sp. n.?; glabra, ramosa, carnosa, foliis ovatis basi rotundatis rarius subcordatis fere penninervis, spicis femineis brevissimis erectis.

FORMOSA: Apes hill (*Playfair*!). Herb. Kew.

1. **Peperomia dindygulensis,** *Miq. Syst. Pip.* p. 122, *in Hook. Lond. Journ. Bot.* v. p. 549, et *Illustr. Pip.* p. 19, t. 13; *C. DC. in DC. Prodr.* xvi. 1, p. 442; *Hook. f. Fl. Brit. Ind.* v. p. 98; *Wight, Ic. Pl. Ind. Or.* t. 1921.

KWANGTUNG: Lofaushan (*Ford*!); LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

Western peninsula of India.

"Perhaps the same as the African *P. polystachya*, Dietr."—*N. E. Brown* in Herb. Kew.

2. **Peperomia reflexa,** *A. Dietr. Sp. Pl.* i. p. 180; *Miq. Syst. Pip.* p. 169; *C. DC. in DC. Prodr.* xvi. 1, p. 451; *Hook. f. Fl. Brit. Ind.* v. p. 99; *Wight, Ic. Pl. Ind. Or.* t. 1923.

Fokien: Amoy interior (*Swinhoe*!); Szechuen: mount Omei, at 4500 feet, and other localities (*Faber*! *A. Henry*!). Herb. Kew.

Subtropical Asia, Africa, America, and Australia.

115. CHLORANTHACEÆ.

1. **Chloranthus angustifolius**, *Oliv. in Hook. Ic. Pl.* t. 1580.

Hupeh: Ichang, Nanto and mountains to the northward (*A. Henry*!). Mus. Brit.; Herb. Kew.

2. **Chloranthus brachystachys**, *Blume, Fl. Jav., Chlor.* p. 13, t. 2; *Solms in DC. Prodr.* xvi. 1, p. 475; *Benth. Fl. Hongk.* p. 334; *Franch. et Savat. Enum. Pl. Jap.* i. p. 444; *Hook. f. Fl. Brit. Ind.* v. p. 100; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 56; *Engler, Jahrb.* vi. p. 55.

Ascarina serrata, *Blume, Enum. Pl. Jav.* i. p. 79.

Sarcandra chloranthoides, *Gardn. in McClell. Calc. Journ. Nat. Hist.* vi. p. 348; *Wight, Ic. Pl. Ind. Or.* t. 1946.

Chloranthus denticulatus, *Cordem. in Adans.* iii. p. 296.

Formosa (*Oldham*, 467!); Szechuen: mount Omei, at 3400 feet (*Faber*!); Kwangtung: Lofaushan (*Ford*!); Hongkong (*Wilford*! *Champion*! *Urquhart*! *Wright*!); Hainan (*A. Henry*!); Luchu Archipelago (*Wright*!). Mus. Brit.; Herb. Kew.

Eastern and Southern India, Ceylon, Malay peninsula, Japan, and the Philippine Islands.

3. **Chloranthus Fortunei**, *Solms in DC. Prodr.* xvi. 1, p. 476; *S. Moore in Journ. Bot.* 1878, p. 138; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 57; *Fortune, A Residence among the Chinese*, 1857, p. 201.

Tricercandra Fortunei, *A. Gr. in Mem. Amer. Acad.* n. s. vi. p. 405.

Saintlegeria gracilis, *Cordemoy in Adansonia*, iii. p. 300.

China: without locality (*Fortune*, 22!); Chekiang: Tahoo lake (*Carles*!); Shantung: Chefoo hills (*Hancock*!); Kiangsi: Kiukiang (*Faber*!); Hupeh: Ichang (*A. Henry*!); Kwangtung (*Bullock*!). Mus. Brit.; Herb. Kew.

Fortune long ago dispelled the commonly accepted idea that *Chloranthus* was used by the Chinese for scenting teas.

4. **Chloranthus** (§ **Tricercandra**) **Henryi**, *Hemsl.*, n. sp.

Herba perennis, multicaulis, glabrescens, caulibus erectis sesquipedalibus ad tripedales altis simplicibus, apice sæpissime (an semper?) 4-foliis, foliis nunc confertissimis nunc internodio plus minusve evoluto. *Folia* petiolata, tenuia, fere membranacea,

late ovata ovato-oblonga vel lanceolata, 3–7 poll. longa, subite acuteque acuminata, basi cuneata vel interdum fere rotundata, crebre apiculato-serrulata, utrinque glabra vel glabrescentia vel secus costam venasque puberula, venis primariis numerosis sat conspicuis. *Inflorescentia* terminalis, longe pedunculata, folia sæpius superans, 3–5-ramosa vel interdum simplex. *Flores* albi (teste *Henry*), glabri, laxiuscule spicati; squama antherifera carnosa, inæqualiter tricaudata, cauda intermedia circiter 2½–3 lineas longa; stamina 3 (vel 4?), antheris lateralibus dithecis, intermedia tetrathecis, thecis per paria discretis, omnibus oblongis; ovarium glabrum, stigmate parvo sessili. *Drupa* globosa, circiter lineam diametro (an matura?), breviter stipitata, stipite incrassato.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 3447, 3920, 4072, 5402!); SZECHUEN: South Wushan (*A. Henry*, 5402 B, 7719!). Mus. Brit.; Herb. Kew.

5. **Chloranthus inconspicuus**, *Swartz in Phil. Trans.* lxxviii. p. 359, t. 15; *Dryand. in Trans. Linn. Soc.* ii. p. 221; *Benth. Fl. Hongk.* p. 334; *Solms in DC. Prodr.* xvi. 1, p. 474; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 56; *Schnizl. Iconogr. Fam. Nat.* t. 80.

Nigrina spicifera, *Lam. Illustr.* t. 71.

Creodus odorifer, *Lour. Fl. Cochinch.* p. 89? ex *Solms in DC. Prodr.* xvi. 1, p. 474.

Chloranthus indicus, *Wight, Ic. Pl. Ind. Or.* t. 1945.

SOUTH CHINA (*Millett*!); KWANGTUNG: Macao (*Callery*!). Mus. Brit.; Herb. Kew.

Cultivated in Japan, Java, and other countries.

6. **Chloranthus japonicus**, *Sieb. in Nov. Act. Nat. Cur.* xiv. 2, p. 681; *Solms in DC. Prodr.* xvi. 1, p. 476; *Franch. et Savat. Enum. Pl. Jap.* i. p. 444; *Franchet, Pl. David.* p. 259; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 57; *Hance in Journ. Bot.* 1878, p. 14.

Tricercandra quadrifolia, *A. Gr. in Perry's Exped. Jap.* ii. p. 318, et *in Mem. Amer. Acad.* n. s. vi. p. 405; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 130; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 57 (lapsu chloranthoides).

Chloranthus mandshuricus, *Rupr. Dec. Pl. Amur.* t. 2; *Maxim. Prim. Fl. Amur.* p. 463.

SHINGKING: Laoling, Kwandien, Fungchung, and other loca-

lities (*Ross*! *Webster*!); CHINKIANG and YANGTSE (*Maries*!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

7. **Chloranthus monostachys**, *R. Br. in Bot. Mag.* t. 2190; *Solms in DC. Prodr.* xvi. 1, p. 477; *Lindl. Coll. Bot.* t. 17.

SOUTH CHINA (*Reeves* ex *Sims*). Mus. Brit.

The only specimen in the herbarium of the British Museum which can be this is labelled *Chloranthus macrostachys*, Br., in Brown's handwriting, recorded as cultivated, and as introduced by Reeves. At the same time there seems no reason why it should have been named *macrostachys*. Probably *C. monostachys*, Br. (*macrostachys*, Br. in herb. Brit. Mus.), *C. Pernyanus*, Solms, and *C. monander*, Br., will prove to be the same as *C. brachystachys*, Blume, in which case the first is the oldest name.

8. **Chloranthus officinalis**, *Blume, Enum. Pl. Jav.* p. 79; *Fl. Jav.* iii. p. 10, t. 1; *Solms in DC. Prodr.* xvi. 1, p. 474; *Hook. f. Fl. Brit. Ind.* v. p. 100.

YUNNAN (*Anderson*!). Herb. Kew.

Eastern India, the Malay peninsula and archipelago to the Philippine Islands.

This is probably the same as the older *C. elatior*, R. Br. in Bot. Mag. *sub* t. 2190.

9. **Chloranthus Oldhami**, *Solms in DC. Prodr.* xvi. 1, p. 476; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 56.

FORMOSA: Tamsui (*Oldham*, 466!). Mus. Brit.; Herb. Kew.

10. **Chloranthus Pernyanus**, *Solms in DC. Prodr.* xvi. 1, p. 474.

KWEICHAU (*Perny* ex *Solms*).

Perhaps the same as *C. monostachys*, R. Br.

11. **Chloranthus serratus**, *Rœm. et Schult. Syst. Veg.* iii. p. 461; *Solms in DC. Prodr.* xvi. 1, p. 475; *Franch. et Savat. Enum. Pl. Jap.* i. p. 444; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 56.

Nigrina serrata, *Thunb. in Nov. Act. Acad. Upsal.* vii. p. 142, t. 5. fig. 1, ex auctor.

HUPEH: Hsingshan, Nanto and mountains to the northward (*A. Henry*, 2673, 7636!). Mus. Brit.; Herb. Kew.

Throughout Japan.

1. **Circæaster agrestis**, *Maxim. in Mél. Biol.* xi. p. 346; *Hook. f. Fl. Brit. Ind.* v. p. 101.

KANSUH: western alpine regions at 7500 feet (*Przewalski*!). Herb. Kew.

Western Himalaya in Kumaon, at about 8000 to 11,000 feet, where Mr. Duthie has recently collected it in quantity.

116. LAURINEÆ*.

1. **Cryptocarya chinensis**, *Hemsl.*

Beilschmiedia chinensis, *Hance in Journ. Bot.* 1882, p. 79.

KWANGTUNG: Lofaushan and other localities (*Ford*!); HONGKONG: Happy Valley woods (*Ford*!). Mus. Brit.; Herb. Kew.

2. **Cryptocarya concinna**, *Hance in Journ. Bot.* 1882, p. 79.

KWANGTUNG: without locality (*Ford*, 324!), var. foliis minoribus cinereis; HONGKONG: Happy Valley woods (*Ford*!). Mus. Brit.; Herb. Kew.

1. **Beilschmiedia assamica**, *Meisn. in DC. Prodr.* xv. 1, p. 64; *Hook. f. Fl. Brit. Ind.* v. p. 124.

YUNNAN (*Anderson*!). Herb. Kew.

Assam, Muneypore, and Burma.

Specimens in young flower, with foliage exactly like Griffith's specimens from Burma, referred to this species in the 'Flora of British India.'

2. **Beilschmiedia fagifolia**, *Nees in Wall. Pl. As. Rar.* ii. p. 69, et *Syst. Laur.* p. 200; *Hook. f. Fl. Brit. Ind.* v. p. 122.

YUNNAN (*Anderson*!); HONGKONG: Victoria Peak (*Ford*, 4, 6!). Herb. Kew.

Silhet, and doubtfully recorded from Assam and Muneypore.

The Yunnan specimen is the same as Dr. Watt's n. 6263 from Muneypore.

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* The limits of several of the genera of this order are far from satisfactory. We have combined *Persea* with *Machilus*, the appressed or recurved perianth-segments in the fruiting condition being too trivial a distinction. We have also reduced *Actinodaphne* to *Litsea*, as there is a gradual transition from sessile fascicles of flowers to the distinctly pedunculate umbellate inflorescence. *Lindera* differs from *Litsea* only in having 2-celled anthers. Both genera exhibit the same kind of variation in foliage and inflorescence. A study of the whole of the Asiatic species might lead to a better classification.

1. **Cinnamomum* Burmanni,** *Blume, Bijdr.* p. 569; *Meisn. in DC. Prodr.* xv. 1, p. 16; *Hance in Journ. Linn. Soc.* xiii. p. 119.

Cinnamomum chinense, *Blume, Bijdr.* p. 569.

Cinnamomum dulce, *Nees, Syst. Laur.* p. 62; *Benth. Fl. Hongk.* p. 290.

KWANGTUNG: Macao (*Callery*!); HONGKONG (*Wright*! *Champion*! *Wilford*!); HAINAN (*B. C. Henry*!). Mus. Brit.; Herb. Kew.

Java.

A specimen in the Kew Herbarium from Hongkong, collected by Champion, named *Cinnamomum Tamala*, var. *albiflorum*, Meisn., by Meisner himself, is undoubtedly the same as *C. Burmanni*, Blume.

2. **Cinnamomum Camphora,** *Nees et Eberm. Med. Pharm. Bot.* ii. p. 430; *Nees, Pl. Off.* t. 130; *Meisn. in DC. Prodr.* xv. 1, p. 24; *Franch. et Savat. Enum. Pl. Jap.* i. p. 411; *Bentl. et Trim. Med. Bot.* iii. t. 222.

Laurus Camphora, *Linn. Sp. Pl.* ed. 1, p. 369; *Thunb. Fl. Jap.* p. 172.

Persea Camphora, *Spreng. Syst. Veg.* ii. p. 268.

KIANGSU: Thistlewood gardens, Bubblingwell Road, Shanghai (*Bullock*!); CHEKIANG: Ningpo (*Cooper*!), Bingjao (*Carles*!); FOKIEN: Changshu (*Bourne*!); FORMOSA: various localities (*Oldham*, 447, 448! *Swinhoe*!); HUPEH: Ichang (*A. Henry*!); KWANGTUNG: common around Pakhoi, but not utilized (*Playfair*!). Mus. Brit.; Herb. Kew.

Japan, and cultivated in many other countries.

Dr. Henry states that the wood is much used in Central China, but no camphor is extracted.

3. **Cinnamomum Cassia,** *Blume, Bijdr.* p. 570; *Meisn. in DC. Prodr.* xv. 1, p. 12; *Hook. f. Fl. Brit. Ind.* v. p. 130; *Hayne, Arzen. Gew.* xii. t. 23; *Bentl. et Trim. Med. Bot.* iii. t. 223; *Dyer in Journ. Linn. Soc.* xx. p. 19.

Laurus Cinnamomum, *Andr. Bot. Repos.* t. 595; *Bot. Mag.* t 2028.

Cinnamomum aromaticum, *Nees in Wall. Pl. As. Rar.* ii. p. 74.

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* We adopt the determinations of Meisner in this order, in many instances, for what they may be worth, because we cannot tarry to examine critically the whole of the material and synonymy.

KWANGTUNG: various localities, cultivated (*Hance*! *Ford*!). Mus. Brit.; Herb. Kew.

Ava?

Recent explorations in China have thrown no light on the wild progenitor of this important cultivated tree.

4. **Cinnamomum Doederleinii,** *Engler, Bot. Jahrb.* vi. p. 57.

LUCHU ARCHIPELAGO (*Doederlein* ex *Engler*).

5. **Cinnamomum Parthenoxylon,** *Meisn. in DC. Prodr.* xv. 1, p. 26; *Kurz, For. Fl. Burma*, ii. p. 289; *Hook. f. Fl. Brit. Ind.* v. p. 135.

Camphora Parthenoxylon, *Nees in Wall. Pl. As. Rar.* ii. p. 72; *Benth. Fl. Hongk.* p. 290.

Cinnamomum Neesianum, *Meisn. in DC. Prodr.* xv. 1, p. 26, cum β. petiolari.

Sassafras Parthenoxylon, *Nees, Syst. Laur.* p. 491.

Parthenoxylon porrectum, *Blume*, et P. Pseudosassafras, *Blume in Mus. Bot. Lugd.-Bat.* i. p. 323.

Phœbe latifolia, *Champ. in Hook. Kew Journ. Bot.* v. p. 197.

Laurus chinensis, *Hort. Berol.* ex *Nees.*

Camphora chinensis, *Nees in Otto & Dietr. Allg. Gart. Zeit.* 1833, p. 91, et *Syst. Laur.* p. 92.

Laurus Sassafras, *Lour. Fl. Cochinch.* p. 254, nec *Linn.* ex *Meisn. in DC. Prodr.* xv. 1, p. 239.

HUPEH: Nanto and mountains to the northward (*A. Henry*, 3936!); HONGKONG (*Champion*! *Wilford*! *Hance*!). Mus. Brit.; Herb. Kew.

Malay peninsula and archipelago.

The Nanto specimen is glaucous and much more like specimens from Burma, referred to this species in the 'Flora of British India,' than those from Hongkong.

A specimen in young bud from Hainan (Rev. B. C. Henry) may be this species, but it has dried quite a pale colour.

6. **Cinnamomum pedunculatum,** *Nees, Syst. Laur.* p. 79; *Meisn. in DC. Prodr.* xv. 1, p. 16; *Franch. et Savat. Enum. Pl. Jap.* i. p. 410.

Laurus pedunculata, *Thunb. Fl. Jap.* p. 176.

KWANGTUNG: without locality (*Ford*, 153, 154!); LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

Japan.

Var. **angustifolium**, *Hemsl.*; foliis anguste lanceolatis, nunc $1\frac{1}{2}$–3 poll. longis et 3–6 lineas latis, nunc usque ad 6 poll. longis et 1 poll. latis, subtus glaucis cinereis vel rufescentibus, floribus sæpius parce pubescentibus.

HUPEH: Ichang and immediate neighbourhood, and Nanto and mountains to the northward (*A. Henry*, 1193, 1293, 1353, 2759, 3466, 3881!); SZECHUEN (*Faber*!). Herb. Kew.

The extreme states of this Chinese variety are very different from the ordinary Japanese *C. pedunculatum*, but there are connecting links in both countries.

7. **Cinnamomum Tamala,** *Fr. Nees in Nees & Eberm. Med. Pharm. Bot.* ii. p. 426; *Meisn. in DC. Prodr.* xv. 1, p. 17; *Hook. f. Fl. Brit. Ind.* v. p. 128; *Hayne, Arzen. Gew.* xii. t. 26?

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 713!); SZECHUEN: South Wushan (*A. Henry*, 5497!); YUNNAN (*Anderson*!). Herb. Kew.

The Chinese specimens we have doubtingly referred to this species may represent more than one species, as they are mostly only barren branches, and present slight differences. Dr. A. Henry says of his 713 and 5497 that they yield a kind of Cassia Bark of inferior quality, used locally as medicine and for adulterating the true Cassia Bark from South China.

Dr. Henry's 7669 from Changyang, Hupeh, is perhaps an undescribed species.

8. **Cinnamomum validinerve,** *Hance in Journ. Bot.* 1882, p. 83.

HONGKONG: Happy valley (*Ford*!). Mus. Brit.; Herb. Kew.

[*Cinnamomum zeylanicum*, Breyne, *a. commune*, Nees, is recorded from China and Japan by Meisner (DC. Prodr. xv. 1, p. 13); but we have seen no Chinese specimens that we could confidently refer to this species.]

1. **Machilus Bournei,** *Hemsl.*, n. sp.

M. Nanmu proxima differt hirsutior, petiolis longioribus, foliorum venis primariis lateralibus multo numerosioribus, venis ultimis conspicue reticulatis, perianthii segmentis latioribus ovali-oblongis, filamentis barbatis, stigmate capitato magno.

FOKIEN: Wuikang (*Bourne*!). Herb. Kew.

This was sent to Kew by Mr. F. S. A. Bourne as the *Nanmu* of the Chinese; but it is certainly quite different from the species sent under that name by Mr. Davenport and figured in Hooker's 'Icones Plantarum,' pl. 1316. To which of these species, if to either, fruit in the Kew Herbarium sent by Mr. E. C. Baber belongs, is uncertain. This fruit is said to be that of the *Nanmu*, from Szechuen; it is spheroidal, somewhat vertically depressed, about a quarter of an inch in its greatest diameter, and subtended by a small, slightly reflexed perianth.

✓ 2. **Machilus breviflora**, *Hemsl.*

Alseodaphne breviflora, *Benth. Fl. Hongk.* p. 292.

HONGKONG (*Wright*!). Herb. Kew.

3. **Machilus chinensis**, *Hemsl.*

Alseodaphne chinensis, *Champ. in Hook. Kew Journ. Bot.* v. p. 198; *Benth. Fl. Hongk.* p. 292; *Meisn. in DC. Prodr.* xv. 1, p. 28.

HONGKONG (*Champion*! *Wright*! *Wilford*! *Ford*!). Mus. Brit.; Herb. Kew.

✓ 4. **Machilus Faberi**, *Hemsl.*, n. sp.

Arbor excelsa (*Faber*), 20–50-pedalis (*A. Henry*), undique glabra, ramulis crassiusculis nigris vel nigrescentibus in apicibus tantum foliosis. *Folia* conferta, graciliter petiolata, crassa, coriacea, anguste oblongo-lanceolata, 3–6 poll. longa, acuta, utrinque attenuata, subtus pallida vel glauca, supra nitida, venis primariis lateralibus numerosis inconspicuis vel obscuris, venis ultimis minutissime reticulatis; petiolus circiter semipollicaris. *Flores* straminei (*A. Henry*), parvi, expansi, circiter 2 lineas diametro, glabri, anguste cymoso-paniculati, pedicellis gracilibus flores vix æquantibus, paniculis gracilibus prope apices ramulorum numerosissimis quam folia brevioribus sæpe dimidio brevioribus, pedunculo partem floriferam æquante vel excedente. *Perianthii segmenta* vix inæqualia, crassiuscula, ovali-oblonga subacuta, ciliolata, intus hirsutula; ovarium glabrum. *Bacca* globosa, 3–4 lineas diametro, perianthii segmentis auctis rigidis arcte appressis, pedicellis leviter incrassatis.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 3438, 3898, 4569, 5507, 7297!); SZECHUEN: mount Omei at 3500 feet (*Faber*!). Mus. Brit.; Herb. Kew.

Narrow, almost obsoletely-veined leaves and profusion of very small flowers characterize this species.

5. **Machilus Grijsii**, *Hance in Ann. Sc. Nat.* 4me série, xviii. p. 226, et *in Journ. Bot.* 1882, p. 38; *Meisn. in DC. Prodr.* xv. 1, p. 504; *Maxim. in Mél. Biol.* xii. p. 534.

AMOY: Fokien (*de Grijs*, hb. *Hance*, 6788!); KWANGTUNG: Lienchau river (*B. C. Henry*!). Mus. Brit.; Herb. Kew.

✓ 6. **Machilus ? Henryi**, *Hemsl.*, n. sp.

Arbor parva, venusta (*B. C. Henry*), ramulis floriferis crassiusculis pubescentibus. *Folia* ad apices ramulorum conferta, petiolata, coriacea, anguste lanceolata, usque ad 7 poll. longa, caudato-acuminata, basi cuneato-attenuata, supra glabra, subtus primum plus minusve pubescentia, inconspicue minute reticulata, venis primariis lateralibus utrinque circiter 12. *Flores* mediocres, cymoso-paniculati, paniculis numerosis angustis longe pedunculatis folia subæquantibus, pedicellis flores vix æquantibus. *Perianthii* segmenta 6, distincte biseriata, fere libera, valvata, subæqualia, crassa, late ovalia, utrinque appresse hirsuta. *Bacca* ignota.

HAINAN (*B. C. Henry*! *A. Henry*, 8501!). Herb. Kew.

Near *Machilus villosus*, Hook. f., but easily distinguished by the narrow leaves.

7. **Machilus longifolia**, *Blume in Mus. Bot. Lugd.-Bat.* i. p. 331; *Meisn. in DC. Prodr.* xv. 1, p. 43; *Franch. et Savat. Enum. Pl. Jap.* i. p. 412; *Engler, Bot. Jahrb.* vi. p. 57.

LUCHU ARCHIPELAGO (*Döderlein* ex *Engler*).

Japan.

✓ 8. **Machilus macrophylla**, *Hemsl.*, n. sp.

Arbor 20–30-pedalis novellis glabris vel citissimo glabrescentibus, ramulis teretibus crassiusculis nigrescentibus. *Folia* sparsa, longe petiolata, crassa, coriacea, anguste lanceolata vel oblanceolata, usque ad 9 poll. longa, patentia, vel ut videtur deflexa, acuminata, deorsum longe attenuata, glaberrima, fere concoloria vel subtus paullo pallidiora, supra nitida, venis primariis paucis inconspicuis, venis ultimis minute reticulatis; petiolus gracilis, 9–18 lineas longus. *Flores* flavo-virides, circiter 3 lineas diametro, extus glabri, anguste cymoso-paniculati, pedicellis crassis flores subæquantibus, paniculis in apicibus ramulorum numerosis erectis quam folia brevioribus longe crassiusculoque pedunculatis. *Perianthii seg-*

menta biseriatim valvata, inæqualia (exteriora minora), crassa, ovali-oblonga, ciliolata, intus sæpe parce apresse hirsuta; filamenta basi plus minusve barbata; ovarium omnino glabrum. *Bacca* globosa, 4–5 lineas diametro, perianthii segmentis incrassatis arcte appressis.

HUPEH: South Patung (*A. Henry*, 7323!); SZECHUEN: South Wushan (*A. Henry*, 5666, 5699, 5756, 7194!). Herb. Kew.

✓ 9. **Machilus microcarpa**, *Hemsl.*, n. sp.

Arbor 25-pedalis (*Henry*), ramulis gracillimis glaberrimis, perulis latis cito deciduis sericeo-hirsutis. *Folia* in gemma plus minusve hirsuta sed citissimo glabrescentia et bene evoluta glaberrima, coriacea, graciliter petiolata, anguste lanceolata vel oblanceolata, 2–3 poll. longa, caudato-acuminata, basi cuneata, supra nitida, subtus glauca, utrinque reticulata, venis primariis lateralibus utrinque circiter 8–10 sat conspicuis. *Flores* albi (*Henry*), 3–4 lineas longi, extus glabri, intus basin versus puberuli, pseudo-racemosi, racemis in apicibus ramulorum aggregatis quam folia brevioribus, pedicellis flores æquantibus vel longioribus. *Perianthii* sæpissime 6-partiti segmenta subcarnosa, subæqualia, erecta, ovali-oblonga, obtusissima, longitudinaliter striato-venosa, intus parcissime hirsuta; stamina glabra, inclusa. *Bacca* globosa, glabra, circiter 2½ lineas diametro, perianthio recurvo subtenda.

SZECHUEN: South Wushan (*A. Henry*, 5615!), mount Omei at 3500 feet (*Faber*!). Herb. Kew.

An elegant species most nearly allied to *M. Thunbergii*, Sieb. et Zucc., but slenderer and smaller in all its parts, with almost racemose flowers.

10. **Machilus Nanmu**, *Hemsl.*; *Davenport in Parl. Papers, China*, No. 2, 1877, p. 13; *Hook. f. Report on Progr. Roy. Gard. Kew.* 1877, p. 33.

Persea Nanmu, *Oliv. in Hook. Ic. Pl.* xiv. p. 10, t. 1316.

SZECHUEN (*Father Vincot*! *Baber*! *Watters*!); YUNNAN (*Davenport*!). Herb. Kew.

Very near, and perhaps a form of, *Machilus oreophila*, Hance.

The name *Nanmu* appears to be applied to several closely allied members of the Laurineæ. The wood is highly esteemed by the Chinese on account of its great durability.

✓ 11. **Machilus neurantha**, *Hemsl.*, n. sp.

Arbor vel frutex 10–40-pedalis (*A. Henry*), ramulis floriferis graciliusculis primum hirsutis interdum dense villosis demum glabrescentibus nigrescentibus. *Folia* sparsa, distincte petiolata, coriacea, anguste lanceolata vel oblanceolata, caudato-acuminata, interdum latiora et minus longe acuminata, maxima 7–8 poll. longa, sed plerumque 4–6 poll. longa, deorsum longe attenuata, subtus primum pubescentia sed cito glabrescentia et demum fere omnino glabra, pallida, supra opaca, costa impressa, venis primariis lateralibus utrinque circiter 8–10 supra impressis subtus costaque elevatis, venis ultimis minute reticulatis; petiolus graciliusculus, 3–9 lineas longus. *Flores* virides (*A. Henry*), circiter 4 lineas diametro, intus extusque pubescentes, cymosi, pedicellis flores vix æquantibus, cymis paucifloris gracillime pedunculatis quam folia sæpe dimidio brevioribus. *Perianthii segmenta* crassa, primum undique molliter pubescentia, leviter inæqualia (interiora longiora), ovali-oblonga, subacuta, fructifera aucta, rigida, glabrescentia, longitudinaliter conspicue nervosa; filamenta plus minusve hirsuta. *Bacca* ovoidea, circiter semipollicaris, perianthio appresso subtenda.

HUPEH: Nanto, Chienshih, Tunghu, and other localities (*A. Henry*, 4483, 4540, 6006, 6386, 7590!); SZECHUEN: North and South Wushan (*A. Henry*, 5499, 5499 A, 7128, 7229!). Herb. Kew.

12. **Machilus oreophila**, *Hance in Ann. Sc. Nat.* 4me série, xviii. p. 227; *Maxim. in Mél. Biol.* xii. p. 536.

FOKIEN (*De Grijs*, hb. *Hance*, 6789!). Mus. Brit.; Herb. Kew.

13. **Machilus salicina**, *Hance in Journ. Bot.* 1885, p. 327.

KWANGTUNG: below Molam on the West river (*Ford*!). Mus. Brit.; Herb. Kew.

✓ 14. **Machilus Sheareri**, *Hemsl*, n. sp.

M. neuranthæ proxima, differt foliis late oblanceolatis vel obovatis abrupte acuminatis usque ad 9 poll. longis et 3 poll. latis adultis subtus ferrugineo-pubescentibus, pedunculis crassioribus, calycibus fructiferis majoribus. *Bacca* matura non visa.

KIANGSI: Kiukiang (*Shearer*!); CHEKIANG: Ningpo mountains (*Faber*!). Herb. Kew.

This may prove an extreme form of *M. neurantha*, larger in all its parts, and having a more nearly permanent indumentum on the under surface of the leaves.

15. **Machilus Thunbergii**, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. no. 704; *Meisn. in DC. Prodr.* xv. 1, p. 42; *Miq. in Ann. Mus.*

Bot. Lugd.-Bat. ii. p. 195; *Franch. et Savat. Enum. Pl. Jap.* i. p. 411; *Engler, Bot. Jahrb.* vi. p. 57 (β. glaucescens, *Blume*); *Maxim. in Mél. Biol.* xii. p. 536.

Laurus indica, *Thunb. Fl. Jap.* p. 173, nec *Linn.*

Machilus japonica, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. n. 705; *Maxim. in Mél. Biol.* xii. p. 536.

Machilus rimosa, *Blume in Mus. Bot. Lugd.-Bat.* i. p. 330; *Benth. Fl. Hongk.* p. 291.

CHEKIANG: Tientai mountains at 2000 feet (*Faber*!); FORMOSA: Tamsui (*Oldham*, 451, 452!), Kelung (*Ford*!); HUPEH: Changyang, Ichang, Patung and neighbourhood (*A. Henry*, 1112, 1252, 2194, 3627, 5232, 5232 A, 6121, 7782, 7782 A, 7783!); SZECHUEN: South Wushan (*A. Henry*, 5503, 5503 A!); HONGKONG (*Champion*! *Wright*!); COREAN ARCHIPELAGO: Port Hamilton (*Wilford*, 686! *Oldham*, 705!). Mus. Brit.; Herb. Kew.

Japan.

Apparently a very common tree in Central China, and having a wide latitudinal range. With a very copious series of specimens before us we cannot separate *M. Thunbergii*, *M. japonica*, and *M. rimosa*; and the late Mr. Maximowicz seems to have held much the same opinion, though he retained them all three in the work cited above. Concerning the second he says:—"An igitur tantum *M. Thunbergii* var. umbrosa habenda?"; and of *M. rimosa* he says:—"A simillima sequente [*M. Thunbergii*] distinguenda tegmentis exterioribus tomentosis (neque tantum ciliolatis), ramulis novellis ochraceo-tomentosis (neque glabris) et paniculis folia æquantibus aut superantibus (nec brevioribus)"—differences which we regard as individual rather than specific.

16. **Machilus velutina**, *Champ. in Hook. Kew Journ. Bot.* v. p. 198; *Benth. Fl. Hongk.* p. 291; *Maxim. in Mél. Biol.* xii. p. 534.

Actinodaphne angustifolia, *Seem. Bot. Voy. 'Herald,'* p. 408, non *Nees.*

HONGKONG (*Wright*! *Champion*! *Hance*!). Mus. Brit.; Herb. Kew.

[*Actinodaphne angustifolia*, Benth. (Fl. Hongk. p. 293), but certainly not of Nees, from Hongkong, was collected by Mr. Ford in exactly the same condition—in fruit—as by Mr. Wilford, and we are still uncertain what genus it belongs to, but it would seem to be congeneric with *Beilschmiedia fagifolia*, Nees.]

C. Fitch del. et lith.

J. N. Fitch imp.

LITSEA CONFERTIFOLIA, *Hemsl.*

1. **Litsea chinensis**, *Blume, Bijdr.* p. 565; *Zoll.* ex *Meisn. in DC. Prodr.* xv. 1, p. 211.

Actinodaphne chinensis, *Nees, Syst. Laur.* p. 600; *Benth. Fl. Hongk.* p. 293; *Meisn. in DC. Prodr.* xv. 1, p. 211; *Seem. Bot. Voy. 'Herald,'* p. 408; *Franch. et Savat. Enum. Pl. Jap.* i. p. 413.

Iozoste chinensis, *Blume, Mus. Bot.* i. p. 364.

Laurus chinensis, *Blume, Bidjr.* p. 565, et *Mus. Bot.* i. p. 364.

Camellia integrifolia, *Choisy, Mém. Ternstr.* p. 60.

Iozoste rotundifolia, var. oblongifolia, *Nees* ex *Hook. et Arn. Bot. Beech. Voy.* p. 209.

HONGKONG: all collectors! Perhaps also from the mainland. Mus. Brit.; Herb. Kew.

[*Litsea chinensis*, Heyne, is =*L. ligustrina*, Hook. f, a native of the western peninsula of India; and *L. chinensis*, Lam., is =*L. sebifera*, Pers.]

2. **Litsea citrata**, *Blume, Bijdr.* p. 565; *Hook. f. Fl. Brit. Ind.* v. p. 155.

Tetranthera citrata, *Nees, Syst. Laur.* p. 560.

Tetranthera polyantha, *Wall. Cat.* 2538; *Nees in Wall. Pl. As. Rar.* ii. p. 67, et *Syst. Laur.* p. 545; *Benth. Fl. Hongk.* p. 293; *S. Moore in Journ. Bot.* 1878, p. 138; *Meisn. in DC. Prodr.* xv. 1, p. 182.

Tetranthera floribunda, *Champ. in Hook. Kew Journ. Bot.* v. p. 199.

CHINA: without locality (*Fortune*, 178!); CHEKIANG: Ningpo (*Everard*!); KIANGSI; Kiukiang (*Maries*!); KWANGTUNG! Wongyu (*Tate*!); HONGKONG (*Wright*! *Wilford*! *Champion*: and many other collectors). Mus. Brit.; Herb. Kew.

Eastern India, Burma, and Java.

By some mistake China is excluded from the area of this species in the 'Flora of British India,' and *citrifolia*, of the 'Flora Hongkongensis,' is referred to as "*citrata*."

3. **Litsea confertifolia**, *Hemsl.*, n. sp. (Plate VII.)

Frutex vel arbor parva (*A. Henry*), fere undique glabra, ramulis floriferis radiatis rectis ad apices tantum, vel etiam ad furcas foliosis. *Folia* conferta, pseudoverticillata, patentia, brevissime petiolata, coriacea anguste lanceolata, 2–5 poll. longa, acuta, undulata, pallida, supra nitida, subtus glauca, costa angusta utrinque leviter elevata, venis inconspicuis. *Flores* secus ramulos aphyllos densissime fasciculati, involucri bracteis extus glabris citissimo deciduis, pedicellis longe sericeo-pilosis. *Perianthii segmenta* 4, petaloidea, late ovata, circiter sesquilineam longa, extus sericeo-hirsuta, pellucido-punctata; stamina 6, filamentis fere filiformibus ima basi tantum barbatis, antheris magnis. *Bacca* nigra (*A. Henry*), ovoidea, 4–5 lineas longa, pedicello vix incrassato, et perianthii tubo omnino deciduo.

HUPEH: Ichang, Patung, Nanto, Changyang, and other localities (*A. Henry*, 1247, 2202, 2203, 3054, 6007, 7829, 7829 A!); SZECHUEN: South Wushan (*A. Henry*, 7197!), mount Omei at 3000 feet (*Faber*!). Herb. Kew.

This species is remarkable in the leaves being crowded at the tips and forks of the branches—that is to say, the leaves of each season's growth are all borne in a tuft at the summit, whilst the flowers are borne on the elongated leafless part below. It is also one of the few species having a 4-parted perianth and 6 stamens. Some of the specimens are named the "little Nan-tree" by Dr. A. Henry.

4. **Litsea Cubeba,** *Pers. Syn. Pl.* ii. p. 4.

Tetranthera Cubeba, *Meisn. in DC. Prodr.* xv. 1, p. 199.

Laurus Cubeba, *Lour. Fl. Cochinch.* p. 252; *Flück. et Hanb. Pharmacogr.* p. 530.

Litsea piperita, *Juss. in Ann. Mus. Par.* vi. p. 213.

Persea Cubeba, *Spreng. Syst. Veg.* ii. p. 269.

Daphnidium Cubeba, *Nees, Syst. Laur.* p. 615.

CHINA ? and COCHINCHINA (ex *Loureiro*). Herb. Kew.

We have only seen the fruit as it appears in commerce, and it is similar to that of the "mountain pepper" of Central China (*Litsea pungens*, Hemsl.), yet evidently not the same, nor even a cultivated variety of it.

✓ 5. **Litsea cupularis,** *Hemsl.*, n. sp.

Frutex 5–10-pedalis (fide *A. Henry*), novellis puberulis, ramulis floriferis rigidis sæpius ad apices et ad furcas tantum foliosis. *Folia* conferta, pseudoverticillata breviter vel brevissime petiolata, rigide coriacea, lanceolata, 2–5 poll. longa, utrinque attenuata, acuta, leviter undulata, supra glabra subnitida vel opaca, subtus glauca vel cinerea, plus minusve puberula, præcipue secus costam venasque, sed sæpius demum glabrescentia, venis primariis lateralibus numerosis subtus sat conspicuis, venulis ultimis minutissime reticulatis; petiolus crassus, pubescens. *Flores* extra-axillares, densissime fasciculati, bracteis citissimo deciduis, pedicellis brevibus pilis longis rufescentibus vestitis. *Perianthii* 6-meri segmenta petaloidea, tenuia, ovata, circiter 2 lineas longa, extus plus minusve hirsuta; filamenta elongata fere filiformia, fere omnino glabra. *Bacca* rubra (fide *A. Henry*!), ovoidea,

circiter semipollicaris, in tubo aucto late cupulæformi perianthii sita.

HUPEH: Ichang, Nanto, Changyang, and other localities (*A. Henry*, 3240, 3473, 3473 A, 3473 B, 4370, 4382, 4584, 7711, 7750!); SZECHUEN: North Wushan (*A. Henry*, 7122!). Herb. Kew.

In foliage this resembles *L. confertifolia*, Hemsl., but the leaves are not so decidedly collected at the tips of the branches, and they are more or less hairy beneath, with a more distinct venation; the flowers are hexamerous, and the fruit is seated in the enlarged cup-shaped tube of the perianth.

6. **Litsea elongata**, *Hook. f. Fl. Brit. Ind.* v. p. 165.

Tetranthera elongata, *Wall. Cat.* n. 2546.

Daphnidium elongatum, *Nees in Wall. Pl. As. Rar.* ii. p. 63, et *Syst. Laurin.* p. 620; *Meisn. in DC. Prodr.* xvi. 1, p. 231.

HUPEH: Kuei (*A. Henry*, 6160!); SZECHUEN: mount Omei at 5000 feet (*Faber*!); KWANGTUNG (*Ford*, 155!). Herb. Kew.

Himalayas, from Garhwal eastward, and Khasia.

7. **Litsea Faberi**, *Hemsl.*, n. sp.

Frutex, ut videtur, ramulis floriferis brevibus puberulis nigrescentibus præsertim ad apices foliosis. *Folia* conferta, coriacea, rigida, distincte petiolata, anguste lanceolata, sæpius 3–4 poll. longa, acuminata, vix acuta, supra glabra, subtus plus minusve ferrugineo-puberula, venis primariis lateralibus utrinque circiter 12 sat conspicuis. *Flores* bene evoluti non visi, umbellati, umbellis sparsis breviter pedunculatis, pedunculis hirsutis; involucri bracteis pedicellisque sericeo-hirsutis. *Perianthii segmenta* petaloidea, oblonga; antheræ 4-loculares. *Bacca* deest.

SZECHUEN: mount Omei at 4000 feet (*Faber*!). Herb. Kew.

8. **Litsea glauca**, *Sieb. in Verhandl. Batav. Genootsch.* xii. p. 24; *Meisn. in DC. Prodr.* xv. 1, p. 224; *Franch. et Savat. Enum. Pl. Jap.* i. p. 413.

Laurus glauca, *Thunb. Fl. Jap.* p. 173.

COREAN ARCHIPELAGO: Port Hamilton (*Oldham*, 713!). Herb. Kew.

Japan.

9. **Litsea gracilipes**, *Hemsl.*, n. sp.

Arbor 12–30-pedalis (*A. Henry*), omnino glabra, ramulis gra-

cillimis nigrescentibus. *Folia* tenuiter coriacea, longiuscule graciliterque petiolata, lanceolata, vix acuta, cum petiolo 2–4 poll. longa, subtus pallidiora, venis inconspicuis, ultimis minute reticulatis; petiolus circiter semipollicaris. *Florum* fasciculi axillares et extra-axillares, circiter 6-flori, bracteis fere glabris, pedicellis sericeo-hirsutis. *Flores* tetrameri; perianthii segmenta petaloidea, tenuia, ovata, extus hirsuta; stamina 6, filamentis fere filiformibus. *Bacca* rubra (ex *A. Henry*), globosa, 4–5 lineas diametro, pedicello leviter incrassato, apice breviter cupulari.

HUPEH: Nanto and mountains to the northward (*A. Henry*, 2999!); SZECHUEN: North Wushan (*A. Henry*, 7113, 7114!).

Herb. Kew.

10. **Litsea hupehana,** *Hemsl.*, n. sp.

Arbor 10–30-pedalis (*A. Henry*), ramulis floriferis graciliusculis glabris nigrescentibus lenticellatis. *Folia* sparsa, graciliter petiolata, tenuiter coriacea, anguste lanceolata, cum petiolo 3–5 poll. longa, acuta, basi cuneata vel subrotundata, utrinque glabra, supra nitidiuscula, subtus glauca, venis primariis, lateralibus numerosis; petiolus gracilis, 5–9 lineas longus, supra puberulus. *Florum* fasciculi sessiles vel brevissime pedunculati, axillares, plures aggregati, circiter 3-flori, bracteis puberulis, pedicellis crassiusculis sericeo-hirsutis. *Flores* flavi (*A. Henry*); perianthii lobi 6, inæquales, obovata vel lanceolata, extus plus minusve hirsuta; stamina 9, filamentis parce barbatis, antheris 4-locularibus.

HUPEH: Fang (*A. Henry*, 6607, 6660!). Herb. Kew.

Specimens almost exactly like this were collected by Sir Joseph Hooker at the coal-pits of Churra, in Khasia. They are mentioned in the 'Flora of British India' (v. p. 169) under *L. Meissneri*, Hook. f.

11. **Litsea japonica,** *Juss. in Ann. Mus. Par.* vi. p. 212; *Poir. in Lam. Encycl. Suppl.* iii. p. 480.

Tetranthera japonica, *Spreng. Syst. Veg.* ii. p. 266; *Meisn. in DC. Prodr.* xv. 1, p. 181; *Sieb. et Zucc. Fl. Jap.* i. p. 166, t. 87 et t. 100. f. 2; *Franch. et Savat. Enum. Pl. Jap.* i. p. 412.

Tomex japonica, *Thunb. Fl. Jap.* p. 190, et *Ic. Pl. Jap.* dec. 3, t. 7.

COREAN ARCHIPELAGO: Port Hamilton (*Oldham*, 709!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

12. **Litsea lancifolia,** *Villar in Blanco, Fl. Filip.* ed. 3, *Nov. App.* p. 181.

LITSEA LAXIFLORA, Hemsl.

J. N. Fitch imp.

Actinodaphne lancifolia, *Meisn. in DC. Prodr.* xv. 1, p. 211; *Franch. et Savat. Enum. Pl. Jap.* i. p. 413.

Daphnidium lancifolium, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 717.

Iozoste lancifolia, *Blume, Mus. Bot.* i. p. 364.

FORMOSA (*Oldham*, 449 !). Herb. Kew.

Japan.

✓13. **Litsea laxiflora,** *Hemsl.*, n. sp. (Plate VIII.)

Arbor 20-pedalis (*A. Henry*), ramulis ultimis elongatis crassis glaucis apice tantum foliosis. *Folia* decidua, serotina, bene evoluta non visa, petiolata, acute trilobata, triplinervia, primum subtus densissime sericeo-hirsuta, fulva, perulis amplissimis. *Flores* ♂ circiter 4 lineas diametro, racemoso-corymbosi, racemis numerosis pseudo-terminalibus 1–2 poll. longis, pedicellis quam flores longioribus sericeo-hirsutis. *Perianthii* sexpartiti segmenta petaloidea, anguste oblongo-spathulata, obtusissima, fere glabra, pellucido-punctata; stamina 9, filamentis ima basi tantum parcissime barbatis, antheris magnis 4-locularibus.

HUPEH: South Patung (*A. Henry*, 1465, 5363 !). Herb. Kew.

✓14. **Litsea mollis,** *Hemsl.*, n. sp.

Frutex 8–10-pedalis, ramis floriferis elongatis rectis puberulis nigrescentibus crassiusculis. *Folia* sparsa, petiolata, tenuiuscula, lata lanceolata, 4–7 poll. longa, sæpius acuta, supra glabra, opaca, subtus primum molliter albido-pubescentia, venis primariis paucis sat conspicuis. *Florum* umbellæ axillares, fasciculatæ, breviter pedunculatæ, pedunculis pubescentibus; involucri bracteæ extus glabræ, crassiusculæ, pedicellis hirsutis. *Flores* bene evoluti non visi; perianthii segmenta fere libera petaloidea, late obovata, intus hirsuta, pellucido-punctata; antheræ 4-loculares. *Bacca* ignota.

HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 1026, 3177, 4434, 5035 !). Herb. Kew.

Dr. Henry's numbers 2614, "shrub, 10 feet," and 2956, "shrub, 3 to 4 feet," may be a smaller-leaved state of *L. mollis*.

Readily distinguished by its long branches, leafy throughout, and soft leaves.

[*Actinodaphne pedunculata*, Meisn. (DC. Prodr. xv. 1, p. 211), syn. *Iozoste pedunculata*, Blume (Mus. Bot. i. p. 364), recorded from China, is unknown to us.]

✓15. **Litsea? Playfairi,** *Hemsl.*, n. sp.

Species elegans *L. pulchellæ* affinis sed gracilior foliis multo minoribus.

Frutex, ut videtur, parvus, omnino glaber, ramulis brevibus gracillimis nigrescentibus. *Folia* sparsa, tenuia simul coriacea, graciliter petiolata, deflexa, lanceolato-caudata, 1–2 poll. longa, vix acuta, supra nitida, subtus glauca, triplinervia, cum venis transversis et venulis ultimis minute reticulatis. *Florum* fasciculi pauciflori, axillares, sessiles, bracteis puberulis vel glabrescentibus, pedicellis hirsutis. *Flores* (alabastra tantum visa) 6-ameri, perianthii segmentis petaloideis.

Kwangtung: Pakhoi (*Playfair*!). Herb. Kew.

Perhaps only a small variety of *L. pulchella*, Meisn.

16. **Litsea polyantha,** *Juss. in Ann. Mus. Par.* vi. p. 211; *Hook. f. Fl. Brit. Ind.* v. p. 162; *S. Moore in Journ. Bot.* 1878, p. 138; *non* Tetranthera polyantha, *Wall.*

Tetranthera monopetala, *Roxb. Pl. Corom.* ii. p. 26, t. 148; *Meisn. in DC. Prodr.* xv. 1, p. 189; *Benth. Fl. Hongk.* p. 292.

Litsæa monopetala, *Pers. Syn. Pl.* ii. p. 4.

Hupeh: Ichang (*A. Henry*, 1302!); Hongkong (*Wright*! *Harland*! *Hance*!); Hainan (*A. Henry*! *Swinhoe*!). Mus. Brit.; Herb. Kew.

North India from the Punjab and Salt Range eastward and southward to the Satpura Range, Tenasserim, Penang, and Java.

17. **Litsea pulchella,** *Meisn. in DC. Prodr.* xv. 1, p. 244; *Hance in Journ. Linn. Soc.* xiii. p. 119.

Litsea ceylanica, var. chinensis, *Benth. in Hook. Kew Journ. Bot.* v. p. 199.

Litsea ceylanica, *Benth. Fl. Hongk.* p. 294, non *Nees.*

Hongkong (*Champion*! *Wright*! *Wilford*! *Ford*!). Mus. Brit.; Herb. Kew.

✓18. **Litsea pungens,** *Hemsl.*, n. sp.

Arbor parva, 10–20-pedalis, ramulis floriferis gracilibus elongatis nigrescentibus, floribus sæpius præcocibus. *Folia* ad apices ramulorum conferta, decidua, membranacea, graciliter breviterque petiolata, primum sericeo-pubescentia, demum glabrescentia, lanceolata vel oblanceolata, 2–4 poll. longa, venis primariis lateralibus utrinque circiter 5. *Flores* flavi (fide *A. Henry*), circiter 3 lineas diametro, distincte umbellati, umbellis breviter pedunculatis 8–12-floris, involucri bracteis crassiusculis extus glabris cito deciduis, pedicellis 4–6 lineas longis gracilibus pedunculisque sericeo-hirsutis. *Perianthii segmenta* fere libera, petaloidea, obovata, longitudinaliter 3–4-venosa, creberrime pellucido punctata, florum ♀ paulo minora et hirsutiora; filamenta ima basi tantum hirsuta. *Bacca* crassa, immatura tantum visa, globosa, circiter sesqui-lineam diametro, pedicello sursum leviter incrassato.

Hupeh: Ichang, Patung, Changlo, and other localities (*A. Henry*, 230, 1302, 3617, 3617 B, 6294!); Szechuen: South Wushan (*A. Henry*, 5579!). Herb. Kew.

According to a note by Dr. Henry, the Chinese call this mountain pepper, and a cultivated kind, it is stated, is eaten. This may refer to *L. piperita*, Juss., the fruit of which is indeed very similar to that of *L. pungens*, Hemsl., though larger and having a distinctly articulated pedicel.

19. **Litsea rotundifolia,** *Hemsl.*, n. sp.

Frutex ramulis gracilibus glabris. *Folia* sparsa, brevissime petiolata, subcoriacea, late ovalia vel fere orbicularia, 9–18 lineas diametro, subtus glauca et secus costam primum puberula, venis primariis lateralibus utrinque 3–4; petiolus brevissimus, crassus, puberulus. *Florum* fasciculi subsessiles, sæpius circiter 3-flori, bracteis tarde deciduis, pedicellis brevissimis. *Perianthium* alte 6-lobatum, tubo hirsuto cupuliformi, lobis petaloideis inæqualibus, ovoideo-oblongis; stamina 9, filamentis fere filiformibus parce barbatis. *Bacca* ignota.

South China: probably Kwangtung (*Harland*!). Herb. Kew.

20. **Litsea sebifera,** *Pers. Syn. Pl.* ii. p. 4; *Hook. f. Fl. Brit. Ind.* v. p. 157 cum synon.

Tetranthera laurifolia, *Jacq. Hort. Schœnbr.* i. p. 59, t. 113; *Meisn. in DC. Prodr.* xv. 1, p. 178.

Sebifera glutinosa, *Lour. Fl. Cochinch.* p. 638.

Glabraria tersa, *Linn. Mant.* p. 276.

Litsea chinensis, *Lam. Encycl.* iii. p. 574.

Tetranthera Roxburghii, *Blume, Mus. Bot.* ii. p. 373.

Tetranthera citrifolia, *Benth. Fl. Hongk.* p. 293, *non* Tetranthera citrata, *Nees.*

China: without locality (*Millett*!); Kwangtung: Macao

(*Callery*!); HONGKONG (*Wright*! *Champion*!); HAINAN (*A. Henry*!). Mus. Brit.; Herb. Kew.

Generally spread in India and Malaya, and extending to Australia.

21. **Litsea sericea,** *Hook. f. Fl. Brit. Ind.* v. p. 156.

Tetranthera sericea, *Wall. ex Nees in Wall. Pl. As. Rar.* ii. p. 67, et *Syst. Laurin.* p. 565; *Meisn. in DC. Prodr.* xv. 1, p. 156.

HUPEH: Patung (*A. Henry*, 1452!). Herb. Kew.

North-eastern India and Muneypore.

✓ 22. **Litsea variabilis,** *Hemsl.*, n. sp.

Arbor vel frutex ramulis floriferis graciliusculis cinereis minute puberulis. *Folia* sparsa, breviter petiolata, coriacea, lanceolata, interdum anguste lanceolata, oblonga, ovata oblanceolata, obovata, late obovata, vel interdum fere orbicularia, acuminata, obtusa, vel rotundata, 2–6 poll. longa, concoloria, glabra vel glabrescentia, venis primariis paucis inconspicuis, venulis ultimis insigniter minute elevato-reticulatis. *Umbellæ* parvæ, circiter 3-floræ, breviter pedunculatæ, sæpe 3–8 in axillis foliorum aggregatæ, rarissime solitariæ, bracteis parvis puberulis tarde deciduis. *Flores* minuti, subsessiles; perianthii segmenta 6, spathulata; stamina 9, filamentis filiformibus parce barbatis exsertis, antheris 4-locularibus. *Bacca* globosa, vix 3 lineas diametro (an matura?), in tubo brevi cupuliformi perianthii sita, pedicello brevissimo incrassato articulato.

HAINAN: various localities (*A. Henry*, 4, 8431, 8540, 8729, 8761!). Herb. Kew.

23. **Litsea verticillata,** *Hance in Journ. Bot.* 1883, p. 356.

KWANGTUNG: at the village of Yünhatin about ten miles north of Canton (*B. C. Henry*, hb. *Hance*, 22051!). Mus. Brit.

1. **Lindera * bifaria,** *Benth.* ex *Hook. f. Fl. Brit. Ind.* v. p. 184.

Daphnidium bifarium, *Nees in Wall. Pl. As. Rar.* ii. p. 63; *Benth. Fl. Hongk.* p. 294; *Meisn. in DC. Prodr.* xv. 1, p. 231; *S. Moore in Journ. Bot.* 1875, p. 231.

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* We have provisionally placed all the laurels with involucrate inflorescence and 2-celled anthers in *Lindera*, and those with 4-celled anthers and an involucrate inflorescence in *Litsea*. Consequent on this arrangement each genus contains evergreen and deciduous species, species having entire or lobed leaves, species having sessile or pedunculate fascicles or umbels of flowers, and species with or without a cup-shaped termination to the fruit-bearing pedicels.

Hongkong (*Eyre*!); Yunnan (*Anderson*). Herb. Kew.

Himalaya mountains from Kumaon eastward, Khasia and Muneypore.

2. **Lindera cercidifolia**, *Hemsl.*, n. sp.

Arbor grandis (*A. Henry*), ramulis ultimis crassiusculis rigidis glabris. *Folia* longe petiolata, subcoriacea, orbiculari-ovata, nunc obscure trilobata nunc, sed rarius, distincte etsi breviter trilobata, 2–3$\frac{1}{2}$ poll. longa lataque, acuminata, basi rotundata, leviter cordata vel interdum subtruncata, triplinervia, cum venis lateralibus distinctis, præter axillas barbatas nervorum glabra, supra subnitida, subtus pallidiora; petiolus gracilis, 6–12 lineas longus. *Flores* flavi (*A. Henry*), præcoces, dense fasciculati, fasciculis sessilibus involucratis, bracteis amplis ovato-rotundatis extimis extus glabris intus sericeis cito deciduis, intimis intus glabris extus sericeis, pedicellis circiter semipollicaribus longe densissimeque sericeo-pilosis. *Perianthii segmenta* petaloidea, spathulata, fere glabra, 2–3 lineas longa; stamina 9 filamentis basi barbatis; ovarii rudimentum glabrum. *Bacca* ignota.

Hupeh: Patung district (*A. Henry*, 2523, 3792, 4919!). Herb. Kew.

We have associated the specimens bearing the above numbers on the authority of Dr. A. Henry, and, so far as the material goes, we see no reason for doubting that they are of the same species; but at the same time there is always a possibility of error when the flowers appear before the leaves, as in this instance, unless the specimens are taken from the very same tree.

3. **Lindera citriodora**, *Hemsl.*

Aperula citriodora, *Blume*, *Mus. Bot.* i. p. 366; *Meisn. in DC. Prodr.* xv. 1, p. 241; *Franch. et Savat. Enum. Pl. Jap.* i. p. 414; *Engler, Bot. Jahrb.* vi. p. 57.

Benzoin citriodorum, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 711.

Luchu Archipelago (*Döderlein* ex *Engler*).

Japan.

4. **Lindera communis**, *Hemsl.*, n. sp.

Arbor parva vel frutex, ramulis floriferis gracilibus puberulis vel glabrescentibus. *Folia* sparsa, brevissime petiolata, crassa, coriacea, sæpius lanceolata, interdum anguste lanceolata, rarius ovata, late ovata vel fere orbicularia simul abrupte acuminata, 2–4-pollicaria, acute acuminata, interdum caudato-acuminata, supra glabra, nitida, subtus cinerea vel pallide ferruginea, puberula, interdum demum glabrescentia, venis primariis lateralibus utrinque 5–7 supra costaque impressis subtus elevatis. *Flores* umbellati, circiter 3–4 lineas diametro, umbellis solitariis vel geminis axillaribus 5–8-floris brevissime pedunculatis, bracteis pubescentibus cito deciduis, pedicellis pubescentibus. *Perianthium* 6-amerum, segmentis petaloideis ovalibus glabris; stamina 9, filamentis glabris, antheris 2-locularibus. *Bacca* rubra (ex *A. Henry*), ovoidea, vix semipollicaria, vel interdum minora et sphæroidea, in tubo perianthii parvo cupulari sita.

HUPEH: Ichang, Nanto and other localities (*A. Henry*, 1146, 1204, 1207, 1262, 1296, 1523, 2613, 2662, 3413, 3413 A, 3413 B, 3947, 4551, 4574!); SZECHUEN: North Wushan (*A. Henry*, 7628!); KWANGTUNG: without locality (*Ford*, 151!). Herb. Kew.

5. **Lindera fragrans**, *D. Oliver in Hook. Ic. Pl.* xviii. t. 1788.

HUPEH: Ichang, Patung, Nanto and other localities (*A. Henry*, 1056, 1298, 2832, 3295, 3295 A, 4553, 5268, 5297, 7616!). Mus. Brit.; Herb. Kew.

"The leaves are pounded and used with branches of arbor vitæ to make incense."—*Dr. A. Henry.*

/ 6. **Lindera fruticosa**, *Hemsl.*, n. sp.

Frutex 3–10-pedalis (*A. Henry*), undique glaber vel glabrescens, ramulis fructiferis gracillimis elongatis. *Folia* decidua, sparsa, longiuscule graciliterque petiolata, membranacea, late ovata, 3–5 poll. longa, acute acuminata, subtus pallida, subtriplinervia; petiolus circiter semipollicaris. *Flores* umbellati, umbellis breviter pedunculatis; pedicellis fructiferis glabris. *Bacca* breviter ovoidea, circiter 3 lineas longa.

HUPEH: Patung district and Fang (*A. Henry*, 4750, 6571!). Herb. Kew.

7. **Lindera glauca**, *Blume, Mus. Bot.* i. p. 325; *Meisn. in DC. Prodr.* xv. 1, p. 244; *Franch. et Savat. Enum. Pl. Jap.* i. p. 415.

Benzoin glaucum, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 710.

KIANGSU: Shanghai (*Carles*!), Fengwangshan (*Forbes*!); CHEKIANG: hills near Hushan and elsewhere (*Carles*!), Ningpo mountains (*Faber*!); KIANGSI: Kiukiang (*Shearer*! *Maries*!); FORMOSA: Tamsui (*Oldham*, 446, 454!); HUPEH: Ichang,

Changyang, Nanto and other localities (*A. Henry*, 347, 1501, 1563, 2101, 2284, 2817, 3239, 6200, 7774!); Szechuen: South Wushan (*A. Henry*, 7217!); Kwangtung (*Ford*!). Mus. Brit.; Herb. Kew.

Japan.

A critical examination of all the specimens referred here and to *L. sericea* and some two or three other allied species might lead to alterations in their limits and probably to combinations. To some extent we have been guided by what Dr. Henry regarded as the same species in the field. Numbers 1501, 1563, 2817, and 3239 he indicated in his notes as the "*Niuchin*" tree of the Chinese.

8. **Lindera megaphylla**, *Hemsl.*, n. sp.

Arbor grandis, fere undique glabra vel cito glabrescens, ramulis floriferis crassis rigidis purpureo-nigrescentibus simul parce lenticellatis. *Folia* sparsa, longiuscule petiolata, crassa, coriacea, lanceolata vel lanceolato-oblonga, sæpius 6–9 poll. longa, interdum pedalia vel ultra, glaberrima, utrinque attenuata sed vix acuta, supra sæpius nitidiuscula, subtus pallida vel glauca, venarum primariarum conspicuarum numerus valde variabilis, venis ultimis minute reticulatis; petiolus 9–18 lineas longus. *Florum* umbellæ breviter pedunculatæ, multifloræ, sæpius geminatæ, bracteis amplis cucullatis plus minusve sericeo-hirsutis, pedicellis gracilibus semipollicaribus dense sericeo-pilosis deinde glabrescentibus incrassatis. *Perianthii segmenta* petaloidea, obovato-spathulata, vix 3 lineas longa, sæpius dorso infra medium parce pilosa; stamina 9, petala superantia, filamentis fere filiformibus ima basi tantum leviter barbatum, ordinis tertii glandulis 2 maximis stipitatis instructis. *Bacca* nigra, ovoidea, circiter 9 lineas longa, basi perianthii tubo aucto cupulari cincta.

Kiangsi: Kiukiang mountains (*Faber*!); Hupeh: Ichang, Patung, Chienshih, Nanto and mountains to the northward (*A. Henry*, 1112, 1284, 2195, 3010, 3010 A, 3151, 3345, 3345 A, 3345 B, 4508, 6609, 7525, 7618, 7848 A!). Herb. Kew.

9. **Lindera membranacea**, *Maxim. in Mél. Biol.* vi. p. 275; *Franch. et Savat. Enum. Pl. Jap.* i. p. 415.

Kiangsu: hills near Shanghai (*Carles*!); Hupeh: Changyang (*A. Henry*, 5248, 5248 A!); Szechuen: South Wushan (*A. Henry*, 5885!). Herb. Kew.

Japan.

The Chinese specimens are rather more hairy than the Japanese; the very young inflorescences are furnished with large membranous reflexed bracts, which doubtless fall away early, and the pedicels of specimens in quite young fruit are scarcely at all thickened.

10. **Lindera obtusiloba**, *Blume, Mus. Bot.* i. p. 325; *Meisn. in DC. Prodr.* xv. 1, p. 246; *Franch. et Savat. Enum. Pl. Jap.* i. p. 416.

Lindera mollis, *D. Oliver in Journ. Linn. Soc.* ix. p. 168; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 197.

COREA: Chemulpo (*Carles*!); COREAN ARCHIPELAGO (*Oldham*, 716!). Mus. Brit.; Herb. Kew.

Japan.

11. **Lindera? Oldhami**, *Hemsl.*, n. sp.

Species facie *L. megaphyllæ* sed minus robusta, ramulis tenuioribus, foliis fere membranaceis supra nitidus subtus semper pubescentibus, umbellis ♀ multifloris, bacca ovoidea semipoll. longa.

FORMOSA: Tamsui (*Oldham*, 455!), Kelung (*Ford*, 49!). Herb. Kew.

12. **Lindera populifolia**, *Hemsl.*, n. sp.

Arbor ramulis fructiferis crassiusculis glabris nigrescentibus. *Folia* sparsa sed præsertim ad apices ramulorum conferta, longe graciliterque petiolata, subcoriacea, glaberrima, orbiculari-obovata, absque petiolo 3–4 poll. longa lataque, integra, basi sæpe plus minusve cuneata, subtus pallidiora, glauca, venis primariis lateralibus utrinque circiter 5–6; petiolus gracilis, glaber, 1–2½ poll. longus. *Flores*...... *Umbellæ* sæpius 4–6-floræ, breviter pedunculatæ; pedunculus 3–4 lineas longus, crassiusculus, hirsutus, pedicellis glabris graciliusculis sursum leviter incrassatis 6–9 lineas longis. *Bacca* globosa, ut videtur matura, 2–2½ lineas diametro.

SZECHUEN: mount Omei at 3000 to 4000 feet (*Faber*!). Mr. Ford also sends specimens of it from the same source, numbered 41 and 78.

Evidently a congener of *Lindera obtusiloba*, Blume, easily distinguished by its orbicular-obovate leaves on long stalks and the very small fruit.

13. **Lindera præcox**, *Blume, Mus. Bot.* i. p. 324; *Meisn. in DC. Prodr.* xv. 1, p. 244; *Franch. et Savat. Enum. Pl. Jap.* i. p. 414.

Benzoin præcox, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 709.

COREA: Soul and Chemulpo (*Carles* !). Herb. Kew.

Japan.

* 14. **Lindera reflexa**, *Hemsl.*, n. sp.

Arbor vel frutex novellis sericeis, ramulis glauco-purpureis. *Folia* sparsa, petiolata, membranacea, rotundato-ovata vel leviter cordata, 2½–3 poll. longa et 2½ poll. lata, obtusa, supra glabra, opaca, subtus pallidiora, plus minusve puberula, venis primariis lateralibus utrinque circiter 6 inter se arcuatim anastomosantibus; petiolus gracilis, glaber, circiter semipollicaris. *Flores* præcoces, prope apices ramulorum nudorum producti, umbellati, umbellis brevissime pedunculatis circiter 5-floris involucratis, bracteis cucullatis cito deciduis, pedicellis 3–4 lineas longis dense pilosis. *Perianthii segmenta* petaloidea, late obovato-oblonga, vel spathulata, circiter sesquilineam longa, arcte reflexa, plus minusve pilosa, simul glandulis pellucidis crebre punctata; antheræ etiam pellucido-punctatæ. *Bacca* non visa.

KWANGTUNG: North River (*Ford*, 128 !). Herb Kew.

The flowers boiled for dissection emitted a powerful aromatic odour. Mr. Ford's dried specimens were from an individual cultivated in the Hongkong botanic garden, brought by a native from the North River, above Canton.

15. **Lindera sericea**, *Blume, Mus. Bot.* i. p. 324; *Meisn. in DC. Prodr.* xv. 1, p. 245; *Hance in Journ. Bot.* 1881, p. 301; *Franch. et Savat. Enum. Pl. Jap.* i. p. 415.

Benzoin sericeum, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 708.

HUPEH: Patung district and Tunghu (*A. Henry*, 2829, 6452 !). Herb. Kew.

Japan.

Several other Chinese specimens in the Kew Herbarium are named *Lindera sericea*, Blume; but we are not clear about the distinctions between this and *L. glauca*, Blume, though the former is described as having "folia præcocia" and the latter as having "flores præcoces."

√ 16. **Lindera sinensis**, *Hemsl.*

Daphnidium sinense, *Blume, Mus. Bot.* i. p. 352; *Meisn. in DC. Prodr.* xv. 1, p. 230.

China (ex *Blume*).

This is one of the species having three-nerved leaves and possibly a variety of *L. strychnifolia*, Villar.

17. **Lindera strychnifolia**, *Villar in Blanco, Fl. Filip.* ed. 3, *Nov. App.* p. 182.

Daphnidium strychnifolium, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 716; *Meisn. in DC. Prodr.* xv. 1, p. 230, cum β concolore; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 196; *Franch. et Savat. Enum. Pl. Jap.* i. p. 414.

Daphnidium Myrrha, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 715, non *Nees*, ex *Meisn.*

China: without locality (*Millett*! *Staunton*!); Kiangsi: Kiukiang (*Shearer*! *Faber*!); Kwangtung: Macao (*Callery*!). Mus. Brit.; Herb. Kew.

Var.? foliis lanceolatis vel ovato-lanceolatis, pubescentibus vel glabrescentibus.

Hupeh: Ichang, Nanto, and Chienshih (*A. Henry*, 1894, 2975, 2985, 3375, 3375 A, 3803, 4552, 5497 B!); Szechuen: Chungching (*Bourne*!), mount Omei (*Faber*!), South Wushan (*A. Henry*, 7256); Kwangtung: Macao (*Callery*!). Herb. Kew.

Including the numbers of Dr. Henry's collection above enumerated, *L. strychnifolia*, Villar, is a very variable species in the shape, size, and vestiture of the leaves.

18. **Lindera triloba**, *Blume, Mus. Bot.* i. p. 325; *Meisn. in DC. Prodr.* xv. 1, p. 246; *Hance in Journ. Bot.* 1882, p. 38; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 250.

Sassafras officinalis, *Sieb. Pl. Œcon. in Verhandl. Bat. Genootsch.* xii. p. 23, excl. *syn. Pers., fide Meisn.*

Benzoin trilobum, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 706.

Shantung: Chefoo, wild? (ex *Franchet*); Chekiang: Ningpo (*Hancock*!). Mus. Brit.; Herb. Kew.

Japan.

√ 19. **Lindera Tzumu**, *Hemsl.*, n. sp.

Arbor 20–50-pedalis (*A. Henry*), ramulis fructiferis crassis glabris apice tantum foliiferis nigrescentibus. *Folia* dimorpha, longe petiolata, coriacea, glabra, vel subtus præcipue secus venas parce hirsutula, nunc ovata vel lanceolata, absque petiolo

usque ad 5½ poll. longa, nunc supra medium latiora et trilobata, lobis obtusiusculis, basi semper cuneata, duabus formis interdum intermixta, venis primariis tertiariisque paucis conspicuis, subtus pallida vix glauca, supra opaca vel subnitida; petiolus teres, gracilis, 1–2½ poll. longus. *Flores* . . . . . cymosi vel per paria pseudo-racemosi, cymis sæpius 6–8 floribus ad 3 poll. longis, pedunculis pedicellisque glabris, pedicellis sub baccam incrassatis. *Bacca* pisiformis, circiter 2½ lineas diametro.

CHEKIANG: Ningpo (*Faber*!); HUPEH: Patung district and Kuei (*A. Henry*, 2856, 5363 A!). Herb. Kew.

"Called *tzumu* or *huangchin*, and produces excellent timber. Very large trees occur."—*A. Henry*.

Specimens in very young foliage collected by Mr. Maries near Kiukiang may belong to this species. In this stage the under surface of the leaves is quite glaucous.

This species is characterized by having cymose, not umbellate inflorescence.

20. **Lindera umbellata**, *Thunb. Fl. Jap.* p. 145, t. 21; *Meisn. in DC. Prodr.* xv. 1, p. 245; *Franch. et Savat. Enum. Pl. Jap.* i. p. 415.

Benzoin Thunbergii, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 707.

CHEKIANG: Ningpo mountains (*Faber*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Patung district and Tunghu (*A. Henry*, 2836, 6430!). Herb. Kew.

Japan.

1. **Cassytha filiformis**, *Linn. Sp. Pl.* ed. 1, p. 35; *Meisn. in DC. Prodr.* xv. 1, p. 254; *Benth. Fl. Hongk.* p. 294; *Hook. f. Fl. Brit. Ind.* v. p. 188; *Wight, Ic. Pl. Ind. Or.* t. 1847; *Hook. Exot. Fl.* t. 167.

Calodium cochinchinense, *Lour. Fl. Cochinch.* p. 247.

FORMOSA: Tamsui (*Oldham*, 450!); PRATAS ISLAND (*Wilford*!); KWANGTUNG: Pakhoi (*Playfair*!); HONGKONG (*Wright*! *Champion*!). Mus. Brit.; Herb. Kew.

Tropical Asia, Africa, America, Australia, and Polynesia.

1. **Hernandia peltata**, *Meisn. in DC. Prodr.* xv. 1, p. 263; *Hook. f. Fl. Brit. Ind.* v. p. 188; *Beddome, Fl. Sylvat.* t. 300; *Seem. Fl. Vit.* t. 52.

LUCHU ISLANDS (*Wright*!). Herb. Kew.

Tropical Asia, East Africa, Madagascar, North Australia, and Polynesia.

117. PROTEACEÆ.

1. **Helicia cochinchinensis,** *Lour. Fl. Cochinch.* p. 83; *Meisn. in DC. Prodr.* xiv. p. 442, quoad plantam Loureirianam; *Benth. Fl. Hongk.* p. 295.

Helicia lancifolia, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 684; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 137; *Meisn. in DC. Prodr.* xiv. p. 439; *Franch. et Savat. Enum. Pl. Jap.* i. p. 403.

HONGKONG (*Wright*! *Ford*!). Mus. Brit.; Herb. Kew.

Japan and Cochinchina.

Loureiro's specimen, on which the genus was founded, is in the British Museum, and is undistinguishable from the Hongkong and Japanese plant.

2. **Helicia erratica,** *Hook. f. Fl. Brit. Ind.* v. p. 189.

Helicia cochinchinensis, *Meisn. in DC. Prodr.* xiv. p. 442, quoad plantam assamicam, *et Kurz, For. Fl. Brit. Burm.* ii. p. 311.

CHINA: without locality or collector's name (*Hb. Kew*!); KWANGTUNG: Lofaushan (*Ford*!). Mus. Brit.; Herb. Kew.

Cochinchina, Sikkim, Khasia, and Martaban.

3. **Helicia formosana,** *Hemsl.*, n. sp.

Arbor 20–30-pedalis (ex *Wilford*), ramulis floriferis ferrugineotomentosis. *Folia* brevissime petiolata, vix coriacea, oblongo-lanceolata, usque ad 7–8 poll. longa, sed sæpius breviora, acuta, plus minusve serrulato-dentata, basi vix cuneata, subtus primum ferrugineo-hirsuta, demum glabrescentia, venis primariis lateralibus numerosis subtus leviter elevatis, venulis ultimis inconspicuis. *Racemi* axillares, folia æquantes vel interdum superantes, graciliusculi sed recti, pedicellis brevibus sæpissime geminatis pedunculisque ferrugineo-hirsutis. *Flores* circiter pollicares, gracillimi, parcissime hirsutuli. *Fructus* ignotus.

FORMOSA: north-east district at 400 feet elevation, June 1858 (*Wilford*, 517!), Kelung, June 1884 (*Ford*, 46!). Herb. Kew.

A critical examination of the Indian species may result in this being identified with one of them, though we have failed to match the specimens.

4. **Helicia terminalis,** *Kurz, For. Fl. Brit. Burma,* ii. p. 312; *Hook. f. Fl. Brit. Ind.* v. p. 190.

YUNNAN: Poneshee (*Anderson*!). Herb. Kew.

Ava.

118 THYMELÆACEÆ.

1. **Daphne Championi,** *Benth. Fl. Hongk.* p. 296.

Daphne Fortunei, *Benth. in Hook. Kew Journ. Bot.* v. p. 196, *non Lindl.*

HONGKONG (*Champion*! *Wright*, *Wilford*! *Tate*! *Urquhart*!). Mus. Brit.; Herb. Kew.

2. **Daphne Genkwa,** *Sieb. et Zucc. Fl. Jap.* i. p. 137, t. 75; *Meisn. in DC. Prodr.* xiv. p. 531; *Maxim. in Mél. Biol.* xi. p. 310; *Franch. et Savat. Enum. Pl. Jap.* i. p. 404; *Franchet, Pl. David.* p. 259 (var. Fortunei).

Daphne Fortunei, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 147, et ii. p. 34, t. 1; *Flore des Serres*, t. 208; *Franch. in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 250.

SHANTUNG: Chefoo (*Perry*! *Faber*! *Hancock*!); CHEKIANG: Ningpo (*Cooper*!); KIANGSI: Kiukiang (*Shearer*!); FOKIEN: Amoy (*Fortune*, 15, 161!); HUPEH: Ichang and other localities (*A. Henry*, 134, 261, 801, 1004, 1005, 1541, 7873!); SOUTHERN SHENSI (*David*!). Mus. Brit.; Herb. Kew.

3. **Daphne odora,** *Thunb. Fl. Jap.* p. 159; *Meisn. in DC. Prodr.* xiv. p. 537; *Smith, Exot. Bot.* t. 47; *Bot. Mag.* t. 1587.

Daphne sinensis, *Lam. Encycl.* iii. p. 438; *Meisn. in DC. Prodr.* xiv. p. 537; *Bretschn. Early Res.* p. 171.

Daphne indica, *Herb. Gen. de l'Amat.* ii. t. 105, *non Linn.*

Daphne japonica, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 692; *Meisn. in DC. Prodr.* xiv. p. 537; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 134; *Franch. et Savat. Enum. Pl. Jap.* i. p. 404.

CHEKIANG: Tientai mountains at 3000 feet (*Faber*!); FORMOSA: Tamsui (*Watters*, hb. *Hance*!); HUPEH: Patung, Nanto and other localities (*A. Henry*, 5350, 5160, 6350, 7903!); SZECHUEN: South Wushan (*A. Henry*, 5768, 7119, 7903!). Mus. Brit.; Herb. Kew.

Japan.

The Indian *Daphne cannabina*, Wall., is very near this, and should perhaps be treated as a variety of it.

Dr. Henry's number 6838, from Fang, in fruit only, is probably a different species.

4. **Daphne Roumea,** *Meisn. in DC. Prodr.* xiv. p. 538.

Roumea chinensis, *Wall.* ex *Meisn.*

China: cultivated in the Calcutta botanic gardens, whither it was sent by Reeve, according to Wallich.

5. **Daphne tangutica,** *Maxim. in Mél. Biol.* xi. p. 309.

Kansuh: western alpine regions, frequent (*Przewalski*, ex *Maximowicz*).

6. **Daphne triflora,** *Lour. Fl. Cochinch.* p. 236; *Meisn. in DC. Prodr.* xiv. p. 541.

Kwangtung: around Canton (ex *Loureiro*).

1. **Edgeworthia Gardneri,** *Meisn. in Denkschr. Regensb. Bot. Gesellsch.* iii. p. 280, t. 6, et *in DC. Prodr.* xiv. p. 543; *Hook. f. Fl. Brit. Ind.* v. p. 195.

Edgeworthia chrysantha, *Lindl. in Journ. Hort. Soc. Lond.* i. p. 148, et *Bot. Reg.* 1847, t. 48.

Edgeworthia papyrifera, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 694; *Miq. in Ann. Mus. Bot.-Lugd. Bat.* iii. p. 135; *Franch. et Savat. Enum. Pl. Jap.* i. p. 405.

Chekiang: Chusan (*Fortune*, 159!); Kiangsi: Kiukiang (*Maries*!); Hupeh: Ichang, cult. (*A. Henry*, 3976!); Szechuen: South Wushan (*A. Henry*, 7246!). Mus. Brit.; Herb. Kew.

Central and Eastern Himalaya, and Japan.

1. **Wickstrœmia angustifolia,** *Hemsl.*, n. sp.

Frutex 1–3-pedalis, fere undique glaber, caulibus erectis vel adscendentibus robustiusculis, ramulis lateralibus floriferis gracillimis, internodiis brevissimis. *Folia* brevissime petiolata, coriacea, glaberrima, sæpius anguste oblongo-spathulata, interdum angustissima, 6–12 lineas longa, obtusa vel minute apiculata, basi obtusa, margine, saltem in siccis, recurva, venis numerosis fere obsoletis. *Flores* pallide lutei (fide *A. Henry*), glabri, vix semipollicares, racemosi, brevissime pedicellati, racemis subsessilibus paucifloris demum sesquipollicaribus. *Perianthii* subcarnosi tubus fere cylindricus, lobis oblongo-ovalibus; stamina 8, biseriata, antheris seriei superioris breviter exsertis; discus unilateralis, trilobulatus; ovarium subsessile, apice tantum villosulum, stylo brevissimo, stigmate amplo globoso. *Bacca* ignota.

Hupeh: Ichang and immediate neighbourhood (*A. Henry*, 1519, 2270, 3313 B, 3594, 4184!). Herb. Kew.

The very narrow crowded leaves sufficiently characterize this species.

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VOLS. XXVI., XXVIII., & XXIX. are in course of simultaneous issue to expedite the publication of papers, and the Parts already published are as follows:—

Vol. XXVI., Nos. 173–175, and 176 the present Part.

(Nos. 177–180 are reserved for the continuation of Messrs. Forbes and Hemsley's 'Index Floræ Sinensis.')

Vol. XXVII., Nos. 181–188. (Complete.)

Vol. XXVIII., Nos. 189–193. (No. 194 is in the press, and Nos. 195, 196 will complete the volume.)

Vol. XXIX. No. 197 will be issued shortly.

Attention to this announcement is specially requested, to prevent application to the Librarian for unpublished Parts.

The Library will be closed during the entire month of August, for the usual cleaning and revision of books.

The announcement of the dates of the Meetings of the ensuing Session will be sent to the Fellows in October.

June 13. Price 3s.

THE JOURNAL

OF

THE LINNEAN SOCIETY.

Vol. XXVI. BOTANY. No. 177.

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NOTE.—The Charter and Bye-Laws of the Society, as amended to the 19th March, 1891, may be had on application.

2. **Wikstrœmia alternifolia,** *Batal. in Acta Horti Petrop.* xiii. p. 99.

KANSUH and SZECHUEN (*Potanin* ex *Batalin*).

3. **Wikstrœmia canescens,** *Meisn. in Denkschr. Regensb. Bot. Gesellsch.* iii. p. 288, et *in DC. Prodr.* xiv. p. 547; *Hook. f. Fl. Brit. Ind.* v. p. 195, excl. syn. W. Chamædaphne; *Maxim. in Mél. Biol.* xii. p. 541.

Wikstrœmia virgata, *Meisn. in DC. Prodr.* xiv. p. 547.

Diplomorpha canescens, *C. A. Mey. in Bull. Acad. Sc. St. Pétersb.* 1843, p. 358.

Diplomorpha virgata, *C. A. Mey. l. c.*

Wikstrœmia virgata, var. ?, *Hemsl. in Journ. Bot.* 1876, p. 209.

Wikstrœmia pauciflora, *Franch. et Savat. Enum. Pl. Jap.* i. p. 406, et ii. p. 481.

KIANGSI: Kiukiang (*Forbes*!). Herb. Kew.

Afghanistan eastward to Khasia and Upper Assam, and in Japan.

The North China *W. Chamædaphne,* Meissn., is reduced to this in the 'Flora of British India'; but that differs so decidedly in the venation and texture of the leaves, if in no other characters, that we prefer retaining it as an independent species.

4. **Wikstrœmia Chamædaphne,** *Meisn. in DC. Prodr.* xiv. p. 547; *Franchet, Pl. David.* p. 260.

Passerina Chamædaphne, *Bunge, Enum. Pl. Ch. Bor.* p. 58; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Maxim. in Mél. Biol.* x. p. 540.

Diplomorpha Chamædaphne, *Meisn. in Bull. Acad. Sc. St. Pétersb.* 1843.

CHIHLI: hills near Peking (*Bunge*! *Williams*! *Bushell*! *Bretschneider*!); KANSUH: south of the Hoangho (*Piasezki* ex *Maximowicz* in litt.). Mus. Brit.; Herb. Kew.

Mongolia.

5. **Wikstrœmia chinensis,** *Meisn. in DC. Prodr.* xiv. p. 546; *Franchet, Pl. David.* p. 260, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 250; *Debeaux, Fl. Tchef.* p. 123.

SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); KIANGSI (*David* ex *Franchet*).

✓ 6. **Wikstrœmia gracilis,** *Hemsl.*, n. sp.

Frutex 3-pedalis (*A. Henry*), ramis gracillimis ultimis floriferis fere capillaribus obscure strigillosis. *Folia* omnia opposita,

membranacea, tenuissima, brevissime petiolata, ovalia, ovata, vel oblonga, sæpius 1–2 poll. longa, obtusissima, primum parcissime strigillosa, cito glabrescentia, subtus pallida, glauca, venis primariis lateralibus utrinque circiter 6 inconspicuis. *Flores* lutei (*A. Henry*), racemoso-paniculati, brevissime pedicellati, strigillosi, angustissimi, vix semipollicares paniculis bisramosis tantum. *Perianthii segmenta* ovalia; stamina 8, biseriata; ovarium glabrum, longe stipitatum, stylo brevissimo, stigmate capitato. *Fructus* ignotus.

Hupeh: Hsingshan, at 4500 ft. (*A. Henry*, 6540!). Herb. Kew.

This is nearest *W. japonica*, Meisn., but that has decidedly ovate leaves, thicker in texture, and it dries a darker colour.

7. **Wikstrœmia indica,** *C. A. Mey. in Bull. Acad. Sc. St. Pétersb.* 1843, p. 357, et *in Ann. Sc. Nat.* 2me série, xx. p. 50; *Meisn. in DC. Prodr.* xiv. p. 543; *Hook. f. Fl. Brit. Ind.* v. p. 195; *Maxim. in Mél. Biol.* xii. p. 539; *Benth. Fl. Austral.* vi. p. 37.

Wikstrœmia viridiflora, *Meisn. in Denkschr. Regensb. Bot. Gesellsch.* iii. p. 286; *Benth. Fl. Hongk.* p. 297.

Wikstrœmia alpina, var., *Benth. in Hook. Kew Journ. Bot.* v. p. 195; *Debeaux, Fl. Tchef.* p. 123.

Daphne cannabina, *Lour. Fl. Cochinch.* p. 236, non *Wall.* fide *Meisn.*

Daphne indica, *Linn.*; *Hook. et Arn. Bot. Beech. Voy.* t. 15.

Wikstrœmia Forsteri, *Decne. in Jacquem. Voy. Bot.* p. 145; *C. A. Mey. in Ann. Sc. Nat.* 2me série, xx. p. 50.

China: without locality (*Millett*! *Parks*! *Fortune*, 147!); Fokien: Foochow (*Maries*!); Formosa: Tamsui (*Oldham*, 456! *Swinhoe*!); Kwangtung: Pakhoi (*Playfair*!), Whampoa (*Hance*, 959!); Hongkong (*Champion*! *Wright*! *Hinds*!); Kwangsi (*Wenyon*!); Hainan (*Swinhoe*! *A. Henry*, 8129!). Mus. Brit.; Herb. Kew.

India, Malaya, Australia, and Polynesia.

Dr. C. Wenyon notes on the label accompanying his specimen, that this shrub is utilized in the province of Kwangsi for making paper.

✓ 8. **Wikstrœmia linoides,** *Hemsl.*, n. sp.

Herba perennis vel biennis, glabra, gracilis, habitu foliisque *Lino usitatissimo* similis, caulibus lignescentibus 2–3-pedalibus, ramulis lateralibus floriferis gracillimis fere capillaribus. *Folia* alterna et opposita, brevissime petiolata, membranacea, anguste oblonga vel obovato-oblonga, 6–12 lineas longa, obtusa vel subacuta, subtus pallida vel glauca, venis primariis lateralibus numerosis fere rectis cum costa angulo acuto formantibus. *Flores* lutei (fide *A. Henry*), glabri, circiter 4 lineas longi, brevissime racemoso-spicati vel subcapitati, subsessiles, 6–12 aggregati, pedunculo terminali gracili folia superante. *Perianthii* tenuis tubus gracilis, lobis late oblongis rotundatis; stamina 8, biseriata; ovarium stipitatum, hirsutum, stylo brevi, stigmate globoso. *Bacca* lutea (*A. Henry*), ovoidea, siccitate vix 3 lineas longa.

HUPEH: Ichang and immediate neighhourhood (*A. Henry*, 615, 646, 1542, 3467, 3467 A!). Herb. Kew.

The fruit appears to be baccate, and the perianth not circumsciss above the ovary, otherwise the plant is more like a *Stellera*.

✓ 9. **Wikstrœmia micrantha**, *Hemsl.*, n. sp.

Fruticulus vel herba perennis, lignescens, erecta, 2–3-pedalis, pauciramosa, præter flores undique glaberrima caulibus ramulisque gracilibus. *Folia* sæpius opposita vel subopposita, interdum alterna, brevissime petiolata, coriacea, oblonga, anguste obovato-oblonga vel spathulata, semi- ad sesquipoll. longa, apice obtusa vel minute apiculata, basi sæpius rotundata, subtus pallida, margine recurva, venis immersis obsoletis. *Flores* lutei (fide *A. Henry*), parcissime puberuli, 2½–3 lineas longi, breviter fasciculato-racemosi, brevissime pedicellati; perianthii subcarnosi lobi ovales; stamina 8, biseriata, inclusa; ovarium sessile, apice tantum villosulum, stigmate amplo capitato fere sessili. *Bacca* non visa.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1550, 1648, 4173, 4273!); SZECHUEN: Chungching (*F. S. A. Bourne*!). Mus. Brit.; Herb. Kew.

Similar to *Wikstrœmia Chamædaphne*, Meisn., but that has densely silky-hairy flowers and the primary veins of the leaves are distinctly visible.

10. **Wikstrœmia Monnula**, *Hance in Journ. Bot.* 1878, p. 13 *Maxim. in Mél. Biol.* xii. p. 538.

KWANGTUNG: along the North river (*Bullock* in hb. *Hance*, 1998!); Lantao island (*Ford's native collector*!). Mus. Brit.; Herb. Kew.

[*Wikstrœmia Spanoghii*, Decne. (Jacquem. Voy. Bot. p. 146), founded on specimens from the island of Timor, is doubtingly recorded by Meisner (DC. Prodr. xiv. p. 545) from China.]

11. **Wikstrœmia nutans,** *Champ. in Hook. Kew Journ. Bot.* v. p. 195; *Meisn. in DC. Prodr.* xiv. p. 545; *Benth. Fl. Hongk.* p. 297; *Maxim. in Mél. Biol.* xii. p. 541.

CHINA: without locality (*Fortune*, 174!); FORMOSA: Taiwan (*Playfair*!); HONGKONG (*Champion*! *Wilford*! *Wright*!). Mus. Brit.; Herb. Kew.

12. **Wikstrœmia obovata,** *Hemsl.*, n. sp.

Frutex dense ramosus, ramulis floriferis rigidis puberulis nigrescentibus. *Folia* brevissime petiolata, papyracea, glabra, obovata, interdum latissime obovata, rarius oblongo-obovata, 1–1½ poll. longa, apice rotundata, basi cuneata, marginata, subtus pallidiora, venis primariis lateralibus numerosis apicem versus excurrentibus sat conspicuis. *Flores* spicati, spicis rigidis erectis puberulis 6–9 lineas longis brevissime pedunculatis. *Perianthium* hypocrateriforme, vix semipollicare, glabrum, vel parcissime pilosulum, subcarnosum, lobis late ovalibus; stamina 8, biseriata; ovarium globosum, glabrum, stigmate fere sessili. *Bacca* matura non visa.

LUCHU ARCHIPELAGO (*Wright*, 256!). Herb. Kew.

13. **Wikstrœmia stenantha,** *Hemsl.*, n. sp.

Fruticulus ramis vel caulibus gracilibus elongatis rectis glabris atro-purpureis, internodiis quam folia brevioribus. *Folia* brevissime petiolata, papyracea vel subcoriacea, oblongo-lanceolata, 1–1½ poll. longa, subacuta, basi obtusa vel rotundata, utrinque glabra, marginata, subtus pallidiora, venis primariis lateralibus utrinque 3–4, venulis ultimis obscuris. *Flores* racemosi, breviter pedicellati, circiter semipollicares, racemis densis erectis brevissime pedunculatis sæpius circiter semipollicaribus glabris vel pilis minutis appressis parcissime munitis; perianthium angustissimum, parce strigillosum, intus glabrum, lobis ovatis obtusis; stamina 8, biseriata; ovarium longe stipitatum, apice pilosum, stigmate subsessili.

KWANGTUNG: Lofaushan (*Ford*!). Herb. Kew.

Similar to *W. indica*, C. A. Mey., but differing in the venation of the leaves, in the very narrow flowers, and in the stipitate ovary, hairy at the top.

[1. **Daphne retusa**, *Hemsl. in Journn. Linn. Soc.* xxix. p. 318.
SZECHUEN: Tachienlu (*Pratt*, 737!). Herb. Kew.

2. **Daphne tenuiflora**, *Bur. et Franch. in Journ. de Bot.* v. 1891, p. 151.
SZECHUEN: Tachienlu (*Prince Henri d'Orléans* ex *Franchet*).
These are additional species: see pages 395 and 396.

1. **Edgeworthia chrysantha**, *Lindl.*, ante, p. 396.
Since the publication of the last part of this Enumeration we have had an opportunity of seeing and examining living specimens of this plant and the Indian *E. Gardneri*, Meisn.; and we have also examined flowers of dried specimens of the two forms, with the result that we deem them sufficiently distinct to rank as species. Under cultivation *E. Gardneri* is an evergreen, whereas *E. chrysantha*, which has very thick, almost fleshy branches, has deciduous leaves, and the flowers expand after the fall of the leaves.

The flowers of *E. chrysantha* have a longer, denser, and more silky tomentum than those of *E. Gardneri*, and invariably dry white, whilst those of the latter dry almost black. In the former the ovary is naked, or nearly so, below the middle; whereas in the latter it is very densely clothed with very long, straight bristles. It should be noted that the figure of *E. chrysantha* (Bot. Reg. 1847, t. 48) is made up from a Chinese drawing. The figure of *E. Gardneri* lately published in the 'Botanical Magazine' (t. 7180) was drawn from a poorly developed specimen.]

1. **Stellera Chamæjasme**, *Linn. Amœn. Acad.* i. p. 400; *Meisn. in DC. Prodr.* xiv. p. 549; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Hook. f. Fl. Brit. Ind.* v. p. 196; *Ledeb. Ic. Pl. Ross.* t. 374.
CHIHLI: Siaowutaishan (*Möllendorff*!). Herb. Kew.
Caucasus eastward to North India and through Central Asia to Mongolia.

1. **Diarthron linifolium**, *Turcz. in Bull. Soc. Nat. Mosc.* v. 1832, p. 204; *DC. Prodr.* xiv. p. 558; *Ledeb. Fl. Ross.* iii. p. 544; *Franchet, Pl. David.* p. 260, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 250.

Chihli: Jehol (*David* ex *Franchet*); Shantung: Chefoo (*Fauvel* ex *Franchet*).

Turkestan to Mandshuria.

2. **Diarthron vesiculosum,** *Fisch. et Mey. in Bull. Soc. Nat. Mosc.* 1839, p. 170; *Meisn. in DC. Prodr.* xiv. p. 558; *Hook. f. Fl. Brit. Ind.* v. p. 196.

Passerina vesiculosa, *Fisch. et Mey.* ex *Ledeb. Fl. Ross.* iii. p. 545.

Shinking: Talienhwan (*Swinhoe*, hb. *Hance*, 6494!). Mus. Brit.; Herb. Kew.

Persia to North-west India and Scongaria.

1. **Aquilaria grandiflora,** *Benth. Fl. Hongk.* p. 297.

Aquilaria malaccensis, *Benth. in Hook. Kew Journ. Bot.* v. p. 195.

Ophiospermum sinense, *Lour. Fl. Cochinch.* p. 281?

Aquilaria chinensis, *Spreng. Syst. Veg.* ii. p. 356; *DC. Prodr.* xiv. p. 602?

Hongkong (*Champion*! *Wright*!); Kwangtung: without locality (*Reeve*!), Lofaushan (*Ford*!); Hainan (*A. Henry*!). Mus. Brit.; Herb. Kew.

119. ELÆAGNACEÆ.

1. **Elæagnus angustifolia,** *Linn. Sp. Pl.* ed. 1, p. 121; *Bot. Reg.* t. 1156.

Elæagnus orientalis, *Linn. Mant.* p. 41; *Pall. Fl. Ross.* i. p. 11, t. 5; *Hance in Journ. Bot.* 1883, p. 356.

Elæagnus hortensis, *Bieberst. Fl. Taur.-Cauc.* i. p. 112; *Schlecht. in DC. Prodr.* xiv. p. 609; *Maxim. in Mél. Biol.* vii. p. 559; *Boiss. Fl. Or.* iv. p. 1056; *Hook. f. Fl. Brit. Ind.* v. p. 201.

Kansuh: south of Hoangho (*Piasezki* ex *Maximowicz* in litt.).

Mediterranean region to North-west India, and through Central Asia to China; but commonly cultivated for its edible fruit.

2. **Elæagnus glabra,** *Thunb. Fl. Jap.* p. 67; *Schlecht. in DC. Prodr.* xiv. p. 614; *Maxim. in Mél. Biol.* vii. p. 561; *Franch. et Savat. Enum. Pl. Jap.* i. p. 409; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 138.

Elæagnus tenuiflora, *Benth. in Hook. Kew Journ. Bot.* v. p. 197.

China: without locality (*Fortune*, 114!); Chekiang: Ningpo (*Carles*, 179!); Kiangsu or Kiangsi (*Maries*!); Formosa:

Tamsui (*Oldham*, 458!); HUPEH: Ichang (*Henry*, 1105, 3169, 3193!); LUCHU ARCHIPELAGO (*Wright*, 258!). Mus. Brit.; Herb. Kew.

Japan.

Dr. A. Henry's numbers 1451, 3697, 5473, 5483, 6652, and 7424 may also belong to this species.

3. **Elæagnus gonyanthes,** *Benth. in Hook. Kew Journ. Bot.* v. p. 196; *Schlecht. in DC. Prodr.* xiv. p. 613; *Maxim. in Mél. Biol.* vii. p. 560; *Hance in Journ. Bot.* 1868, p. 372.

KWANGTUNG: Macao (*Forbes*! *Callery*! *Hance*, 7560!). Mus. Brit.; Herb. Kew.

4. **Elæagnus Grijsii,** *Hance in Ann. Sc. Nat.* 4me série, xv. p. 227.

FOKIEN: without locality (*De Grijs*, hb. *Hance*, 6686!). Mus. Brit.; Herb. Kew.

5. **Elæagnus latifolia,** *Linn. Sp. Pl.* ed. 1, p. 121; *Schlecht. in DC. Prodr.* xiv. p. 610; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477, et *in Mél. Biol.* vii. p. 560; *Hook. f. Fl. Brit. Ind.* v. p. 202, excl. syn. E. Simonii, *Carr.*

CHINA: recorded by the authors cited above, but we have seen no Chinese specimens that we could refer with certainty to this species, though Ford's 33, 1879, from the North river, Kwangtung, and Henry's 3307 and 3307 A, from the neighbourhood of Ichang, may belong here.

It is widely spread in North and South India, Burma, and the Malay Islands.

6. **Elæagnus Loureiri,** *Champ. in Hook. Kew Journ. Bot.* v. (1853) p. 196; *Benth. Fl. Hongk.* p. 298; *Schlecht. in DC. Prodr.* xiv. p. 613; *Maxim. in Mél. Biol.* vii. p. 559; *Henriques in Bol. Soc. Brot.* iii. p. 143.

KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Champion*! *Wright*! *Wilford*! *Urquhart*!). Mus. Brit.; Herb. Kew.

7. **Elæagnus macrophylla,** *Thunb. Fl. Jap.* p. 67; *Schlecht. in DC. Prodr.* xiv. p. 614; *Maxim. in Mél. Biol.* vii. p. 560; *Franch. et Savat. Enum. Pl. Jap.* i. p. 408.

Corean Archipelago: Port Hamilton (*Wilford*, 689! *Oldham*, 662!). Mus. Brit.; Herb. Kew.

Japan.

8. **Elæagnus multiflora,** *Thunb. Fl. Jap.* p. 66; *Schlecht. in DC. Prodr.* xiv. p. 614; *Bot. Mag.* t. 7341.

Elæagnus crispa, *Thunb. loc. cit.*

Elæagnus longipes, *A. Gray in Mem. Amer. Acad.* n. s. vi. p. 405; *Maxim. in Mél. Biol.* vii. p. 560; *Franch. et Savat. Enum. Pl. Jap.* i. p. 408; *Gard. Chron.* 1873, p. 1015, fig. 206.

Elæagnus edulis, *Sieb.* ex *May in Rev. Hort.* 1876, p. 18; *Clarté in Chron. Soc. d'Acclim.* 1878, p. 55.

Kiangsi: Kiukiang (*Maries*! *Faber*, 999!); Hupeh: Patung (*A. Henry*, 1424!), Chienshih (*A. Henry*, 5484 A and B!). Mus. Brit.; Herb. Kew.

Japan.

It is cultivated in Japan for its fruit, of which there are several varieties, and in Europe on account of its ornamental character.

9. **Elæagnus Oldhami,** *Maxim. in Mél. Biol.* vii. p. 558.

Fokien: Amoy (*Hance*, 1415!), Foochow (*Maries*!); Formosa: near Tamsui (*Oldham*, 459!). Mus. Brit.; Herb. Kew.

10. **Elæagnus pungens,** *Thunb. Fl. Jap.* p. 68; *Schlecht. in DC. Prodr.* xiv. p. 614; *Maxim. in Mél. Biol.* vii. p. 559; *Franch. et Savat. Enum. Pl. Jap.* i. p. 409.

Elæagnus Simonii, *Carr. in Rev. Hort.* 1869, p. 100.

China: without locality (*Fortune*, 17!); Kiangsu: Shanghai (*Maingay*!); Kiangsi: Kiukiang (*Maries*!); Formosa: Tamsui (*Oldham*, 461, 462!); Hupeh: Ichang, Nanto and mountains to the northward (*A. Henry*, 2953, 3065!). Mus. Brit.; Herb. Kew.

Japan.

11. **Elæagnus umbellata,** *Thunb. Fl. Jap.* p. 66, t. 14; *Schlecht. in DC. Prodr.* xiv. p. 614; *Maxim. in Mél. Biol.* vii. p. 559; *Hook. f. Fl. Brit. Ind.* v. p. 201; *S. Moore in Journ. Bot.* 1878, p. 138; *Hance in Journ. Bot.* 1882, p. 38; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 250.

Elæagnus parvifolia, *Wall. Cat.* 4026; *Royle, Ill. Himal. Pl.* t. 81. f. 1; *Bot. Reg.* xxix. t. 51.

Elæagnus reflexa, *Decne.* ex *Morr. in Bull. Acad. Brux.* iii. (1836) p. 171; ex *Maxim. loc. cit.*

Chihli: near Peking (*Bushell*!); Kiangsu: Shanghai

(*Faber* !); CHEKIANG: Ningpo (*Everard*! *Hancock* !); HUPEH: near Ichang (*A. Henry*, 1228, 7775 !); FOKIEN: Amoy (*Fortune*, 77 !); COREA: West Coast (*Wykeham Perry* !), Chemulpo (*Carles* !). Mus. Brit.; Herb. Kew.

Afghanistan eastward through North India to Japan.

12. **Elæagnus**, sp. n.?; foliis iis *E. umbellatæ* similis sed majoribus, fructibus oblongis elongatis, in siccis costatis.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1637, 1637 A !). Herb. Kew.

1. **Hippophaë rhamnoides**, *Linn. Sp. Pl.* ed. 1, p. 1023; *Schlecht. in DC. Prodr.* xiv. p. 607; *Hook. f. Fl. Brit. Ind.* v. p. 203.

KANSUH: south of Hoangho (*Przewalski* !). Herb. Kew.

North-western Europe to Persia, North India, and Siberia.

120. LORANTHACEÆ.

1. **Loranthus ampullaceus**, *Roxb. Fl. Ind.* ii. p. 189; *DC. Prodr.* iv. p. 296; *Hook. f. Fl. Brit. Ind.* v. p. 220.

KWANGTUNG: Lofaushan (*Ford*, 79 !); HAINAN (*A. Henry*, 8112 !). Herb. Kew.

2. **Loranthus bibracteolatus**, *Hance in Journ. Bot.* 1880, p. 301.

KWANGTUNG: along the North river (*Gerlach*, hb. *Hance*, 20792; *Ford* !). Mus. Brit.; Herb. Kew.

3. **Loranthus chinensis**, *DC. Mém. Loranth.* p. 28, t. 7; *DC. Prodr.* iv. p. 301; *Benth. Fl. Hongk.* p. 141; *Maxim. in Mél. Biol.* ix. p. 611.

HONGKONG (*Champion* !); KWANGTUNG (*Hance*, 15744 !). Mus. Brit.; Herb. Kew.

4. **Loranthus estipitatus**, *Stapf in Trans. Linn. Soc., Bot* 2nd series, iv. ined.

Loranthus Scurrula, *var.* obtecta, *Kurz, For. Fl. Brit. Burm.* ii. p. 319; *Hook. f. Fl. Brit. Ind.* v. p. 209.

KWANGTUNG: Lofaushan (*Ford* !); HAINAN (*A. Henry*, 8261 !). Herb. Kew.

Burma, Malaya, and Cochinchina.

This differs from *L. Scurrula* in having an oblong or subglobose sessile fruit.

5. **Loranthus europæus,** *Linn. Sp. Pl.* ed. 2, p. 1672; *DC. Prodr.* iv. p. 294; *Franchet, Pl. David.* p. 261.

CHIHLI: Peking (*David*, 441, ex *Franchet*).

Eastern Europe, Asia Minor, Persia, and Kurdistan.

6. **Loranthus Fordii,** *Hance in Journ. Bot.* 1885, p. 38.

KWANGTUNG: Pukong (*Ford,* hb. *Hance*, 22225 !). Mus. Brit.

A very distinct species, of which we have only seen the one specimen in Hance's herbarium.

7. **Loranthus nigrans,** *Hance in Journ. Bot.* 1881, p. 209.

HUPEH: near Ichang (*Watters*, hb. *Hance*, 21123 !). Mus. Brit.

This is probably the same as some of Dr. Henry's specimens which we have referred to *L. Yadoriki,* Sieb. et Zucc.

8. **Loranthus notothixoides,** *Hance in Journ. Bot.* 1883, p. 356.

HAINAN: Lamko (*B. C. Henry*, hb. *Hance*, 22169 !). Mus. Brit.; Herb. Kew.

9. **Loranthus odoratus,** *Wall. in Roxb. Fl. Ind., ed. Carey et Wallich,* ii. p. 215; *DC. Prodr.* iv. p. 294; *Hook. f. Fl. Brit. Ind.* v. p. 204.

Loranthus Hemsleyanus, *King in Journ. Linn. Soc.* xxviii. p. 120.

HUPEH: Changyang—on *Xanthoxylum* and also on *Quercus* (*A. Henry*, 7849 !). Herb. Kew.

North India, from Nepal to Khasia, and in Muneypore and Burma.

The Chinese specimens are of the broad-leaved form, to which Dr. G. King gave the name *Hemsleyanus*, founded on specimens collected by General Collett in Burma.

10. **Loranthus pentapetalus,** *Roxb. Fl. Ind.* i. p. 553, et ii. p. 190; *DC. Prodr.* iv. p. 295; *Wall. Pl. As. Rar.* t. 225; *Hook. f. Fl. Brit. Ind.* v. p. 206.

YUNNAN (*Anderson* !); HAINAN (*B. C. Henry* !). Herb. Kew.

North India from Nepal eastward, Burma, and Malay peninsula and archipelago.

11. **Loranthus Sampsoni,** *Hance in Journ. Bot.* 1871, p. 133; *Maxim. in Mél. Biol.* ix. p. 614.

KWANGTUNG: on trees along the river Loting (*Sampson*, hb. *Hance*, 9013 !). Mus. Brit.; Herb. Kew.

12. **Loranthus Scurrula,** *Linn. Sp. Pl.* ed. 2, p. 472; *Hook. f. Fl. Brit. Ind.* v. p. 208, excl. var. *obtecta.*

KWANGTUNG: without locality (*Ford,* 156!). Herb. Kew.

Throughout India and in Ceylon.

13. **Loranthus Yadoriki,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* n. 398 (Jodoniki), ex *Maxim. in Mél. Biol.* ix. p. 609; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 481.

HUPEH: Ichang, Nanto, Chienshih, Changyang, Patung, and various other localities, on oak, elm, crab, and mulberry trees (*Maries*! *A. Henry,* 1066, 1176, 2190, 2496, 3200, 3905, 5902, 5902 A, 5902 B, 7597, 7701, 7876!); SZECHUEN: mount Omei, 3500 to 5000 feet (*Faber,* 196, 220!); LUCHU ARCHIPELAGO (*Wright,* 260!). Mus. Brit.; Herb. Kew.

Japan.

14. **Loranthus,** species *L. cuneato* similis, sed foliis multo crassioribus et fructibus subsessilibus. Flores non visi.

HAINAN (*B. C. Henry*!). Herb. Kew.

1. **Viscum album,** *Linn. Sp. Pl.* ed. 1, p. 1023; *DC. Prodr.* iv. p. 278; *Maxim. in Mél. Biol.* ix. p. 615; *Franchet, Pl. David.* p. 261; *Debeaux, Fl. Tchef.* p. 69; *Baker & Moore in Journ. Linn. Soc.* xvii. p. 385; *Hook. f. Fl. Brit. Ind.* v. p. 223.

CHIHLI: near Peking (*Bushell*!), Jehol (*David*!); SHINGKING: Jaoling (*Ross*!), between Moukden and Tungcheshien (*James*!); SHANTUNG: Chefoo (*Forbes*!); HUPEH: Ichang (*A. Henry,* 7883!). Mus. Brit.; Herb. Kew.

Western Europe through North India and Central Asia to Japan.

2. **Viscum articulatum,** *Burm. f. Fl. Ind.* p. 311, nec auctorum plurimorum; *DC. Prodr.* iv. p. 284; *Hook. f. Fl. Brit. Ind.* v. p. 226.

Viscum moniliforme, *Blume, Bijdr.* p. 667, *et Fl. Jav., Loranth.* t. 25 B.

FOKIEN: Amoy (*Swinhoe*! *Hance,* 1451!); HUPEH: Nanto and mountains to the northward (*A. Henry,* 3206!). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya.

3. **Viscum japonicum,** *Thunb. in Trans. Linn. Soc.* ii. p. 329; *DC. Prodr.* iv. p. 283; *Hook. f. Fl. Brit. Ind.* v. p. 226.

Viscum articulatum, *Benth. Fl. Hongk.* p. 141; *Franch. et Savat. Enum. Pl. Jap.* i. p. 406; *Franch. Pl. David.* p. 262, *non Burm. f.*

FOKIEN: Amoy (*Swinhoe*!); SHENSI: Tsingling mountains (*David* ex *Franchet*); HONGKONG (*Champion*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya, and extending to Japan, Mauritius, Australia, and Polynesia.

We have followed the 'Flora of British India' in the synonymy and distribution of this species and *V. articulatum*. Certainly they are very different from each other.

4. **Viscum orientale**, *Willd. Sp. Pl.* iv. p. 737; *DC. Prodr.* iv. p. 278; *Benth. Fl. Hongk* p. 141; *Miq. Fl. Ind. Bat.* i. p. 804; *Hook. f. Fl. Brit. Ind.* v. p. 224; *Maxim. in Mél. Biol.* ix. p. 616.

Viscum ovalifolium, *Wall.* ex *Hook. et Arn. Bot. Beech. Voy.* p. 190.

CHINA: without locality (*Millett*!); HONGKONG (*Wilford*! *Champion*! *Wright*!); HAINAN (*A. Henry*, 8420! *Hancock*, 37!). Mus. Brit.; Herb. Kew.

Common in India and Malaya.

Sir Joseph Hooker (Fl. Brit. Ind. v. p. 225) retains *V. ovalifolium*, Wall., as a separate species, whilst admitting that Miquel (Fl. Ind. Bat. i. p. 805) may have been right in reducing it to *V. orientale*, Willd. We cannot distinguish the Chinese specimens referred to the former from the latter.

121. SANTALACEÆ.

1. **Thesium chinense**, *Turcz. in Bull. Soc. Nat. Mosc.* 1837, no. vii. p. 157; *DC. Prodr.* xiv. p. 649; *Hance in Journ. Bot.* 1869, p. 42; *Baker & Moore, in Journ. Linn. Soc.* xvii. p. 385; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 476; *Franchet, Pl. David.* p. 262.

Thesium decurrens, *Blume* ex *A. DC. in DC. Prodr.* xiv. p. 652; *Franch. et Savat. Enum. Pl. Jap.* i. p. 407.

Thesium rugulosum, *Bunge* ex *A. DC. in DC. Prodr.* xiv. p. 649.

CHIHLI (*Bunge*!), Jehol (*David* ex *Franchet*); SHINGKING: Jaoling (*Ross*!); SHANTUNG: Chefoo (*Wykeham Perry*!); HUPEH: Ichang, Patung, Nanto and mountains to the northward (*A. Henry*, 1433, 1960, 4567, 7777!); SZECHUEN: South Wushan (*A. Henry*, 7211!), Chungking (*Faber*, 834!); KWANGTUNG:

Pakhoi (*Playfair* !); COREA (*Wykeham Perry* ! *Carles* !); LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit.; Herb. Kew.

Japan.

2. **Thesium psilotoides,** *Hance in Journ. Bot.* 1868, p. 48.

KWANGTUNG: summit of the Pakwan mountains (*Sampson*, 1128 ! *Hance*, 13749 !). Mus. Brit.; Herb. Kew.

1. **Buckleya lanceolata,** *Miq. Cat. Mus. Bot. Lugd.-Bat. Fl. Jap.* p. 79; *Franch. et Savat. Enum. Pl. Jap.* i. p. 407.

Buckleya quadriala, *Benth. et Hook. f. Gen. Pl.* iii. p. 227.

Quadriala lanceolata, *Sieb. et Zucc. Fam. Nat. Fl. Jap.* i. p. 86, t. 2 B.

HUPEH: Hsingshan at 4500 feet (*A. Henry*, 6539 !), Fang (*A. Henry*, 6694 !). Mus. Brit.; Herb. Kew.

Japan; and a very closely allied species inhabits eastern North America.

1. **Henslovia frutescens,** *Champ. in Hook. Kew Journ. Bot.* v. p. 194; *Benth. Fl. Hongk.* p. 299; *Seem. Bot. Voy. 'Herald,'* p. 408.

HONGKONG (*Wright* ! *Wilford* ! *Champion* ! *Hinds* !); HAINAN: Lingmen (*A. Henry*, 8527 !). Mus. Brit.; Herb. Kew.

2. **Henslovia sessiliflora,** *Hemsl.*, n. sp.

Frutex undique glaber, siccitate pallidus, ramulis ultimis gracilibus dense foliatis. *Folia* breviter petiolata, coriacea, anguste obovato-oblonga, 1–1½ poll. longa, indistincte triplinervia. *Flores* ♂ ignoti, ♀ axillares, sessiles, solitarii vel geminati vix ultra lineam longi, bracteolis minutissimis suffulti; perianthium cylindrico-campanulatum, dentibus brevibus deltoideis erectis.

KWANGTUNG: Pakhoi (*Playfair* !). Herb. Kew.

A smaller slenderer plant than *H. frutescens*, drying yellowish green, and having smaller sessile female flowers.

1. **Champereia Griffithiana,** *Planch.* ex *Kurz in Journ. As. Soc. Bengal*, xliv. (1875), ii. p. 154; *For. Fl. Brit. Burma*, ii. p. 330 (Griffithii); *Hook. f. Fl. Brit. Ind.* v. p. 236.

FORMOSA: Taikow and Taiwan (*Playfair* !). Herb. Kew.

Burma and Malacca.

122. BALANOPHOREÆ.

1. **Balanophora Harlandi,** *Hook. f. in Trans. Linn. Soc.* xxii. p. 426, t. 75; *Eichl. in DC. Prod.* xvii. p. 144; *Benth. Fl. Hongk.* p. 140.

HONGKONG (*Harland*! *Wilford*! *Hance*! *Lamont* !). Mus. Brit.; Herb. Kew.

✓ 2. **Balanophora Henryi,** *Hemsl.*, n. sp.

Planta 2½–4 poll. alta. *Pedunculus* in siccis sæpius vix 3 lineas crassus, ♂ supra medium nudus, infra medium bracteis sparsis instructus, ♀ brevior (unica planta tantum visa) bracteis amplioribus per totam longitudinem fere instructus. *Inflorescentia* oblonga vel ovoidea, maxima vix pollicaria. *Flores* ♂ distincte pedicellati, trimeri, circiter sesquilineam diametro; perianthii segmenta suborbicularia; stamina 3 sessilia, magna, conniventia. *Flores* ♀ bracteolis filiformibus immixti.

HUPEH: near Ichang (*A. Henry* !). Herb. Kew.

This differs from *Balanophora Harlandi*, Hook. f., in the shape of the inflorescence and in the distinctly pedicellate male flowers.

3. **Balanophora involucrata,** *Hook. f. in Trans. Linn. Soc.* xxii. pp. 30 et 44, tt. 4–7; *Eichl. in DC. Prod.* xvii. p. 144; *Hook. f. Fl. Brit. Ind.* v. p. 237.

HUPEH: Fang (*A. Henry*, 6825, 6851, 6880 !); SZECHUEN: without locality (*A. Henry*, 8888 !), chiefly near Tachienlu at 9000 to 13,500 feet (*Pratt*, 412 !). Mus. Brit.; Herb. Kew.

North India, from Simla to Sikkim.

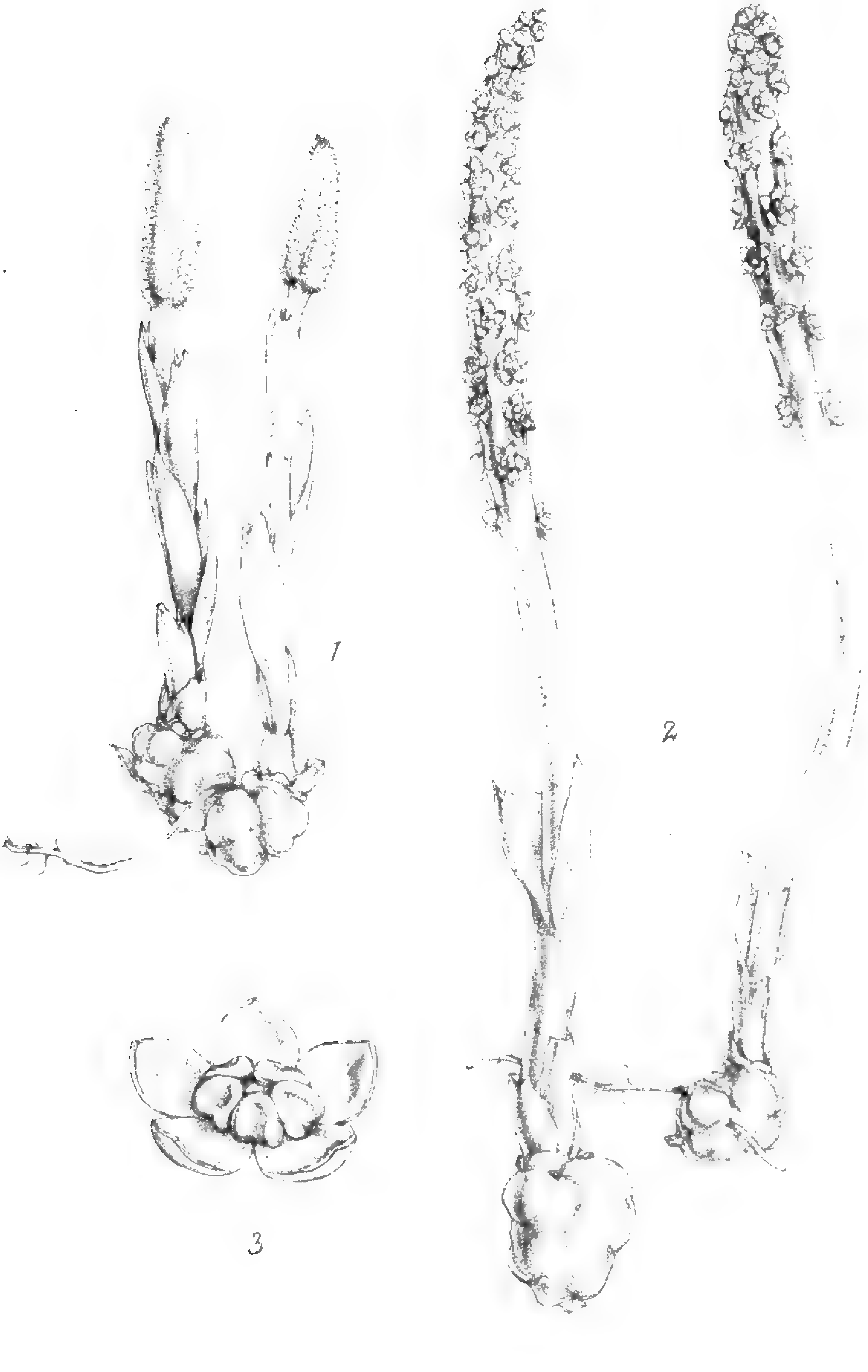
✓ 4. **Balanophora laxiflora,** *Hemsl.*, n. sp. (Plate IX. fig. 2 & 3.)

Planta ♂ graciliuscula, 4–5 poll. alta. *Pedunculus* infra medium paucibracteatus, bracteis parvis. *Flores* ♂ sessiles, laxiuscule spicati, sæpissime 5-meri, interdum 4-meri vel 6-meri, circiter 2 lineas diametro; perianthii segmenta rotundata; antheræ 5, sessiles.

SZECHUEN: without locality (*A. Henry*, 7112 !). Herb. Kew.

✓ 5. **Balanophora minor,** *Hemsl.*, n. sp. (Plate IX. fig. 1.)

Planta ♀ gracilis, 1½–2½ poll. alta. *Pedunculus* per totam fere longitudinem bracteatus, bracteis sæpius suboppositis. *Inflorescentia* anguste oblonga, circiter semipollicaris. *Flores* ♀ subsessiles vel breviter stipitati, circa stipites graciles spadicel-



C. Fitch del et lith.

1. BALANOPHORA MINOR, ♀. Hemsl.
2-3. B. LAXIFLORA, ♂. Hemsl.

lorum capitatorum dispositi, stylus gracillimus quam ovarium fere duplo longior.

HUPEH: Fang (*A. Henry!*). Herb. Kew.

This differs in its very small dimensions from all the other species of the genus, except the Indian *B. Hookeriana*, Hemsl. (Kew Bull. 1894, p. 102), which is even smaller.

6. **Balanophora polyandra,** *Griff. in Trans. Linn. Soc.* xx. p. 94, t. 7; *Eichl. in DC. Prod.* xvii. p. 149; *Hook. f. Trans. Linn. Soc.* xxii. p. 47, et *Fl. Brit. Ind.* v. p. 238.

HUPEH: Fang (*A. Henry*, 6689, 7934!); SZECHUEN: mount Omei, at 8000 ft. (*Faber*, 179!). Mus. Brit.; Herb. Kew.

North India, in the Sikkim Himalaya and Khasia mountains.

Specimens in the Kew Herbarium from the Luchu archipelago (*Wright*, 317 and 318) probably belong to this species.

7. **Balanophora ?**

CHINA: without locality (*Swinhoe!*). Mus. Kew.

This is a very distinct plant, and may be the type of a new genus; but the material is insufficient to determine this point. It has a large tuber-like rugose caudex about 4 inches in diameter, with large crowded bracts at the base of the stout peduncle, which is floriferous throughout; and the male flowers are densely packed and pedicellate, with a four-lobed perianth and a short andrœcium.

123. EUPHORBIACEÆ.

1. **Euphorbia altaica,** *C. A. Mey. in Ledeb. Fl. Alt.* iv. p. 190; *DC. Prodr.* xv. 2, p. 128; *Maxim. in Mél. Biol.* xi. p. 838; *Kanitz, Pl. Exped. Szech.* p. 54,

KANSUH (*Szechenyi* ex *Kanitz*).

Siberia.

2. **Euphorbia Atoto,** *Forst. f. Fl. Ins. Austral. Prodr.* p. 36; *Boiss. in DC. Prodr.* xv. 2, p. 12; *Hance in Journ. Bot.* 1878, p. 232; *Maxim. in Mél. Biol.* xi. p. 831; *Hook. f. Fl. Brit. Ind.* v. p. 248.

FORMOSA: Taiwan (*Playfair!*); PRATAS ISLAND (*Wilford*, 446!); HONGKONG (*Sampson!*); HAINAN: Hoihow (*Bullock!*). Mus. Brit.; Herb. Kew.

Ceylon, Malaya, Polynesia, Australia.

3. **Euphorbia bifida,** *Hook. et Arn. Bot. Beech. Voy.* p. 213; *Boiss. in DC. Prodr.* xv. 2, p. 25; *Maxim. in Mél. Biol.* xi. p. 832.

KWANGTUNG: Macao (*Vachell*! *Hance*, 13718!), Tyloo Island (*Wright*!), Pakhoi (*Playfair*!). Mus. Brit.; Herb. Kew.

4. **Euphorbia (§ Tithymalus) Erythræa,** *Hemsl.*, n. sp.

Herba perennis, erecta vel ascendens, 9–18 poll. alta, omnino glabra, demum sæpissime rubescens, caulibus a basi ramosis vel simplicibus ut videtur annotinis floriferis, internodiis quam folia multo brevioribus. *Folia* tenuissima, deorsum valde attenuata, nec vere petiolata, oblongo-spathulata, 1–2½ poll. longa, apice rotundata, simul sæpe minute apiculata, venis inconspicuis. *Umbella* composita, terminalis, parva, radiis sæpissime 5 gracillimis 9–12 lineas longis, radiis secundariis 2 brevissimis; umbellæ laterales interdum plures, radiis 2; folia umbellarum anguste oblonga, ovato-oblonga vel interdum ellipsoidea, radios æquantia vel breviora; folia floralia libera, semiorbicularia, vel obscure trilobata, maxima 6–7 lineas diametro. *Involucrum* campanulatum, glabrum, lobi parvi, membranacei, glandulis linearibus brevissime cornutis. *Capsula* non visa.

HUPEH: Ichang and immediate neighbourhood (*Maries*! *A. Henry*, 1261, 1275, 3432!). Mus. Brit.; Herb. Kew.

5. **Euphorbia Esula,** *Linn. Sp. Pl.* ed. 1, p. 461; *Boiss. in DC. Prodr.* xv. 2, p. 160; *Maxim. in Mél. Biol.* xi. p. 839 (varietates plures); *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 386; *Hance in Journ. Bot.* 1875, p. 134, et 1878, p. 14; *Debeaux, Fl. Shangh.* p. 53, et *Fl. Tchef.* p. 125; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 251.

Euphorbia Cyparissias, *Turcz. Fl. Baic. Dahur.* ii. 2, p. 87, ex *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477, non *L.*, = var. cyparissoides, *Boiss. in DC. Prodr.* xv. 2, p. 161.

CHIHLI: near Peking (*Williams*! *Bretschneider*! *Bullock*!); SHINGKING: south of Hingjing (*Ross*!), between Moukden and Tungcheshien (*James*!), Tungling (*Webster*!); SHANTUNG: Chefoo (*Perry*!); HUPEH: Ichang (*A. Henry*, 1385!); COREA: west coast (*Perry*!); COREAN ARCHIPELAGO: Tsik group (*Oldham*, 735!). Mus. Brit.; Herb. Kew.

Western Europe to Persia, and through Central Asia to Mandshuria, but apparently not hitherto found in Japan.

The Chinese specimens nearly all belong to the variety *cyparissoides*, Boiss.

6. **Euphorbia Helioscopia**, *Linn. Sp. Pl.* ed. 1, p. 459; *Boiss. in DC. Prodr.* xv. 2, p. 136; *Franchet, Pl. David.* p. 263; *Hook. f. Fl. Brit. Ind.* v. p. 262; *Benth. Fl. Hongk.* p. 301; *Maxim. in Mél. Biol.* xi. p. 838.

Euphorbia Peplus, *Seem. Bot. Voy. 'Herald,'* p. 409, non *Linn.* fide *Benth. loc. cit.*

KIANGSI: Kiukiang (*Faber*, 808!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3428 A!); SHENSI (*David* ex *Franchet*); KANSUH (*Przewalski*!); HONGKONG (*Hance*!); COREAN ARCHIPELAGO (*Oldham*, 732!); LUCHU ARCHIPELAGO (*Wright*, 269!). Mus. Brit.; Herb. Kew.

Western Europe to India and Japan, and naturalized in many other countries.

7. **Euphorbia (§ Tithymalus) Henryi**, *Hemsl.*, n. sp.

Herba perennis suffruticosa, (id est, caules steriles per hiemen persistentes etiam foliis persistentibus), erecta, undique glabra, rhizomate repenti. *Caules* circiter bipedales, infra inflorescentiam simplices teretes infra medium cito aphylli. *Folia* caulium sterilium in apicibus conferta breviter petiolata vel subsessilia, crassa, coriacea, anguste obovata vel oblanceolata, interdum anguste oblanceolata, 2¼–4 poll. longa, obtusissima, basi cuneata, marginata, subtus glauca, costa supra impressa subtus elevata, venis paucis fere omnino obsoletis. *Folia* caulium fertilium pauca, minora, sparsa. *Umbella* composita terminalis, radiis primariis 2–3 poll. longis, sæpe 5, secundariis (et ternariis si adsunt) 9–18 lineas longis sæpissime 2, omnibus gracilibus vel graciliusculis, umbellæ plures minores laterales interdum adsunt; folia umbellarum ovato-oblonga vel obovata, circiter pollicaria, obtusa vel rotundata simul interdum minute apiculata; folia floralia libera, reniformia, 9–15 lineas lata. *Involucri* campanulati intus puberuli lobi lati, subtruncati, emarginati, ciliolati, cornibus glandularum brevibus latis obtusis. *Capsula* vix 3 lineas diametro, lævis, glabra, semine subgloboso pallide brunneo lævi minute caruncu lato.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1140, 3429, 3429 A, 3588!), Changyang (*A. Henry*, 7902!). Mus. Brit.; Herb. Kew.

Dr. Henry notes that this plant has fragrant yellow flowers.

In foliage it is very near *E. macrostegia*, Boiss., but that belongs to the group having "folia floralia connata."

✓ 8. **Euphorbia (§ Tithymalus) hippocrepica,** *Hemsl.*, n. sp.

Herba perennis, erecta, 1–2 ped. alta, undique glabra, caulibus haud lignescentibus, internodiis brevissimis. *Folia* caulium sterilium fertiliumque similia, subpetiolata, membranacea, anguste obovato-oblonga vel spathulata, 1½–3 poll. longa, apice obtusissima vel rotundata, deorsum valde attenuata subtus vix pallidiora, venis omnibus obscuris. *Umbella* composita, terminalis, parva, radiis circiter 5 vix pollicaribus; umbellæ axillares sæpe 5, simplices, pedunculis gracilibus quam folia brevioribus; folia umbellarum ovato-oblonga vel oblonga, radios æquantia; folia floralia libera, oblongo-orbicularia, maxima circiter semipollicaria, concava, erecta, flores includentia. *Involucrum* anguste campanulatum, intus glabrum, lobi brevi denticulato-ciliolati, glandularum cornibus carnosis hippocrepiformibus arcte reflexis. *Capsula* immatura lævis glabra.

HUPEH: near Ichang (*A. Henry*, 7853, 7867 !). Herb. Kew.

In habit and foliage this resembles *Euphorbia Erythræa*, Hemsl., but it does not change red, and the closely reflexed horseshoe-shaped glands are characteristic.

9. **Euphorbia humifusa,** *Willd. Enum. Pl. Hort. Berol., Suppl.* p. 27; *Boiss. in DC. Prodr.* xv. 2, p. 30; *Maxim. in Mél. Biol.* xi. p. 832; *Franch. et Savat. Enum. Pl. Jap.* i. p. 420; *Franchet, Pl. David.* p. 262; *Debeaux, Fl. Tchef.* p. 124, *Fl. Shangh.* p. 53, et *Fl. Tients.* p. 39; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 251.

Euphorbia pseudochamæsyce, *Fisch. et Mey. Ind. Sem. Hort. Petrop.* x. p. 73.

Euphorbia thymifolia, *Thunb. Fl. Jap.* p. 196, nec *Linn.*

Euphorbia Chamæsyce, *Bunge, Enum. Pl. Chin. Bor.* p. 59, non *Linn.*

CHIHLI and SHINGKING to SZECHUEN, HUPEH and FORMOSA (*Möllendorff*! *Maingay*! *Oldham*! *A. Henry*! *Playfair*! *Carles*! *Williams*! and others). Mus. Brit.; Herb. Kew.

Siberia, Mongolia, and Japan.

10. **Euphorbia hypericifolia,** *Linn. Sp. Pl.* ed. 1, p. 454; *Boiss. in DC. Prodr.* xv. 2, p. 23; *Benth. Fl. Hongk.* p. 301; *Maxim. in Mél. Biol.* xi. p. 832; *Hook. f. Fl. Brit. Ind.* v. p. 249; *Hook. Exot. Fl.* i. t. 36.

KWANGTUNG: Fatshan and other localities (*Ford*! *Wenyon*!); HONGKONG (*Wright*!). Mus. Brit.; Herb. Kew.

Widely spread in the tropics of both hemispheres.

11. **Euphorbia Jolkini,** *Boiss. Cent. Euphorb.* p. 32, *Ic. Euphorb.* t. 71, et *in DC. Prodr.* xv. 2, p. 121; *Maxim. in Mél. Biol.* xi. p. 836; *Franch. et Savat. Enum. Pl. Jap.* i. p. 421; *Kurz in Journ. Bot.* 1873, p. 193; *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 42.

Euphorbia palustris, *A. Gray in Mem. Amer. Acad.* n. s. vi. p. 405, non *Linn.*

YUNNAN (*Anderson* ? ex *Kurz*); FORMOSA: Tamsui (*Oldham*, 472!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

[*Euphorbia Lathyris,* Linn., has been recorded as occurring in China (DC. Prodr. xv. 2, p. 99), or as probably Chinese (Kurz in Journ. Bot. 1873, p. 193), and Maximowicz (Mél. Biol. xi. p. 833) mentions it as an escape from cultivation in Japan. We have seen no specimens from either country.]

12. **Euphorbia lunulata,** *Bunge, Enum. Pl. Chin. Bor.* p. 59; *Boiss. in DC. Prodr.* xv. 2, p. 162; *Maxim. in Mél. Biol.* xi. p. 841; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 251, et *Pl. David.* p. 263; *Debeaux, Fl. Tchef.* p. 125.

CHIHLI: various localities near Peking and at Jehol (*Bunge*! *Bretschneider*! *Bushell*! *Hancock*!); SHINGKING: Laoling (*Webster*!); SHANTUNG: Chefoo (ex *Debeaux* et *Franchet*). Herb. Kew.

Eastern Mongolia.

13. **Euphorbia Pallasii,** *Turcz. in Bull. Soc. Nat. Mosc.* xxvii. 1 (1854), p. 358; *Boiss. in DC. Prodr.* xv. 2, p. 114, et *Euphorb. Ic.* t. 62; *Ledeb. Fl. Ross.* iii. p. 565; *Maxim. in Mél. Biol.* xi. p. 830.

SHINGKING: Fungshan (*Ross*!), Moukden to Yaloo river (*Webster*!). Herb. Kew.

Dahuria and Mandshuria.

14. **Euphorbia pekinensis,** *Rupr. in Maxim. Prim. Fl. Amur.* p. 239, in adnot. sub n. 349; *Boiss. in DC. Prodr.* xv. 2, p. 121; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 251; *Debeaux, Fl. Tchef.* p. 124; *Maxim. in Mél. Biol.* xi. p. 834.

Euphorbia Sampsoni, *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 41; *Maxim. in Mél. Biol.* xi. p. 835.

Euphorbia lasiocaula, *Boiss. in DC. Prodr.* xv. 2, p. 1266; *Franch. et Savat. Enum. Pl. Jap.* i. p. 421, et ii. p. 485; *Franchet, Pl. David.* p. 263.

Euphorbia coralloides, *Thunb. Fl. Jap.* p. 197, ex *Maxim.*, non *Linn.*

CHIHLI: near Peking (*Kirilin*, *Tatarinow*, and *Bretschneider* ex *Maximowicz*), Jehol (*David*, 1997!); SHINGKING: various localities (*Birnie*! *Swinhoe*! *Webster*!); SHANTUNG: Chefoo (*Perry*!); CHEKIANG: Ningpo mountains (*Faber*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 436, 476, 476 A, 837, 2934, 3648, 6190!); KWANGTUNG: along the North river (*Sampson*, hb. *Hance*, 11422!); COREAN ARCHIPELAGO: Hooper island (*Oldham*, 734!). Mus. Brit.; Herb. Kew.

Japan.

15. **Euphorbia pilosa,** *Linn. Sp. Pl.* ed. 1, p. 460?; *Hook. f. Fl. Brit. Ind.* v. p. 260.

CHEKIANG (*Faber*!); HUPEH: Ichang, Patung and neighbourhood (*A. Henry*, 696, 818, 2448, 3588 A, 4011, 4746!); SZECHUEN: South Wushan (*A. Henry*, 5556, 5556 A, 5556 B!). Mus. Brit.; Herb. Kew.

As limited in the 'Flora of British India' this species ranges from Western Europe to North India and Eastern Siberia, but we are not quite sure that the Chinese specimens cited above are all the same species and true *E. pilosa*, Linn.

16. **Euphorbia pilulifera,** *Linn. Sp. Pl.* ed. 1, p. 454; *Boiss. in DC. Prodr.* xv. 2, p. 21; *Benth. Fl. Hongk.* p. 302; *Hook. et Arn. Bot. Beech. Voy.* p. 213; *Franch. et Savat. Enum. Pl. Jap.* i. p. 420; *Maxim. in Mél. Biol.* xi. p. 831; *Hook. f. Fl. Brit. Ind.* v. p. 250; *Jacq. Ic. Pl. Rar.* iii. t. 478.

SOUTH CHINA, FORMOSA, and LUCHU ARCHIPELAGO: not uncommon (*Millett*! *Wilford*! *Fortune*! *Wright*! *A. Henry*!). Mus. Brit.; Herb. Kew.

Tropical and subtropical regions of both hemispheres.

17. **Euphorbia prolifera,** *Hamilt. in D. Don, Prodr. Fl. Nep.* p. 62; *Hook. f. Fl. Brit. Ind.* v. p. 264.

Euphorbia nepalensis, *Boiss. in DC. Prodr.* xv. 2, p. 157.

YUNNAN: Poneshee and Mynela (*Anderson*!). Herb. Kew.

Northern India, though not hitherto found in the eastern part, adjoining China.

18. **Euphorbia sanguinea,** *Hochst. et Steud.* ex *Boiss. in DC. Prodr.* xv. 2, p. 35; *Benth. Fl. Hongk.* p. 302; *Maxim. in Mél. Biol.* xi. p. 833.

KIANGSU: Shanghai (ex *Bentham*); HONGKONG (*Harland* ex *Bentham*).

We have not found the Chinese specimens referred by Bentham to this species, which is common in E. tropical Africa and Arabia. They have probably been transferred to some other species.

19. **Euphorbia serrulata,** *Reinw.* ex *Bl. Bijdr.* p. 635; *Boiss. in DC. Prodr.* xv. 2, p. 25; *Maxim. in Mél. Biol.* xi. p. 832.

Euphorbia Vachellii, *Hook. et Arn. Bot. Beech. Voy.* p. 213.

FORMOSA: west coast (*Wilford*, 542 !); KWANGTUNG: Macao (*Vachell* !); HAINAN (*A. Henry*, 8312 !); LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit.; Herb. Kew.

Timor, Celebes, and Philippine Islands.

20. **Euphorbia Sparmanni,** *Boiss. Cent. Euphorb.* p. 5; *Benth. Fl. Austral.* vi. p. 46; *Maxim. in Mél. Biol.* xi. p. 831.

Euphorbia ramosissima, *Boiss. in DC. Prodr.* xv. 2, p. 14, non *Hook. et Arn.*

BORODINO ISLAND, to the east of the Luchu Archipelago (*Weyrich* ex *Maximowicz*).

Eastern Australia and Polynesia, eastward to Elizabeth and Pitcairn Islands.

This hardly comes within our limits, but we follow Maximowicz in including it.

21. **Euphorbia Stracheyi,** *Boiss. in DC. Prodr.* xv. 2, p. 114; *Hook. f. Fl. Brit. Ind.* v. p. 259.

SZECHUEN: chiefly near Tachienlu, at 9000 to 13,500 ft. (*Pratt*, 747 !). Mus. Brit.; Herb. Kew.

Alpine Himalaya, from Kumaon to Bhotan.

22. **Euphorbia thymifolia,** *Linn. Sp. Pl.* ed. 1, p. 454; *Burm. Fl. Ind.* p. 2; *Boiss. in DC. Prodr.* xv. 2, p. 47; *Benth. Fl. Hongk.* p. 302; *Hook. f. Fl. Brit. Ind.* v. p. 252; *Henriques in Bol. Soc. Brot.* iii. p. 142; *Maxim. in Mél. Biol.* xi. p. 833.

SHANTUNG: Chefoo (*Perry* !); FORMOSA: west coast (*Wilford*, 534 !); PESCADORES (*Swinhoe* !); KWANGTUNG (*Millett* !), Lofaushan (*Ford* !). Mus. Brit.; Herb. Kew.

Widely spread in warm countries of both hemispheres.

23. **Euphorbia Tirucalli**, *Linn. Sp. Pl.* ed. 1, p. 452; *Boiss. in DC. Prodr.* xv. 2, p. 96; *Benth. Fl. Hongk.* p. 301; *Maxim. in Mél. Biol.* xi. p. 833; *Hook. f. Fl. Brit. Ind.* v. p. 254.

HONGKONG (*Hance*, 2984!). Mus. Brit.; Herb. Kew.

A native of Africa, cultivated and naturalized in Asia, according to the author of the 'Flora of British India.'

1. **Sarcococca pruniformis**, *Lindl. Bot. Reg.* t. 1012; *Muell. Arg. in DC. Prodr.* xvi. 1, p. 11; *Hook. f. Fl. Brit. Ind.* v. p. 266 (varietates plures).

Sarcococca trinervia, *Wight, Ic. Pl. Ind. Or.* t. 1877.

Pachysandra? coriacea, *Hook. Exot. Fl.* t. 148.

Lepidopelma podocarpifolia, *Kl. in Bot. Ergeb. Reise Waldem.* t. 22.

Sarcococca saligna, *Muell. Arg. in DC. Prodr.* xvi. 1, p. 11; *Franchet, Pl. Delav.* p. 154.

Sarcococca salicifolia, *Baill. Monogr. Bux.* p. 49.

Sarcococca Hookeriana, *Baill. Monogr. Bux.* p. 53; *Franchet, Pl. Delav.* p. 155.

HUPEH: Ichang, Nanto, and other localities (*A. Henry*, 2588, 2589, 2993, 2993 A, 3077, 3077 A, 3287, 3832, 7834!); SZECHUEN: mount Omei, at 3500 ft. (*Faber*!), North Wushan (*A. Henry*, 7065!). Mus. Brit.; Herb. Kew.

Afghanistan, through North India, and southward to Ceylon and Sumatra.

Very variable in foliage, both in China and India.

1. **Buxus sempervirens**, *Linn.*; *Muell. Arg. in DC. Prodr.* xvi. 1, p. 18; *Hook. f. Fl. Brit. Ind.* v. p. 267; *Benth. Fl. Hongk.* p. 315, excl. syn. B. sinensis, *Link*.

Buxus Harlandi, *Hance in Journ. Linn. Soc.* xiii. p. 123.

Buxus stenophylla, *Hance in Journ. Bot.* 1868, p. 331, et *in Journ. Linn. Soc.* xiii. p. 124 in nota.

Buxus japonica, *Muell. Arg. in DC. Prodr.* xvi. 1, p. 20; *Franch. et Savat. Enum. Pl. Jap.* i. p. 428.

Buxus microphylla, *Sieb. et Zucc. in Abh. Akad. Muench.* iv. 2 (1846), p. 142.

Buxus virens, *Thunb. Fl. Jap.* 77.

Buxus Fortunei, *Carr. in Rev. Hort.* 1870–71, p. 519.

Buxus Wallichiana, *Baill. Monogr. Bux.* p. 63.

CENTRAL and SOUTHERN CHINA, common and exceedingly variable; also in the LUCHU ARCHIPELAGO. Mus. Brit.; Herb. Kew.

As here limited, this species extends from the Canary Islands through North Africa and Europe to Japan. In various parts of its area it presents a great range of variation; but although all these forms are associated under one head here, we think a careful study of them might lead to a more convenient classification.

Franchet (Plantæ Delavayanæ, p. 136) retains *B. sempervirens*, Linn., *B. Wallichiana*, and *B. microphylla*, Sieb. et Zucc., as distinct species.

[*Buxus chinensis*, Link, is cited by Mueller (DC. Prodr. xvi. 1, p. 23) as a synonym of *Simmondsia californica*, Nutt.]

1. **Pachysandra axillaris**, *Franchet, Plantæ Delavayanæ*, p. 135, t. 26.

SZECHUEN: South Wushan (*A. Henry*, 5589, 5709, 7529!), chiefly near Tachienlu at 9000 to 13,500 ft. (*Pratt*, 796!); YUNNAN (*Delavay*!). Mus. Brit.; Herb. Kew.

2. **Pachysandra terminalis**, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* p. 34; *Baill. Monogr. Bux.* p. 57; *Muell. Arg. in DC. Prodr.* xvi. 1, p. 21; *Franch. et Savat. Enum. Pl. Jap.* i. p. 428.

HUPEH: Fang Changyang, Patung (*A. Henry*, 4904, 6802, 7836!); SZECHUEN: N. Wushan (*A.*] *Henry*, 6802 A!). Mus. Brit.; Herb. Kew.

Common in Japan.

✓ 1. **Bridelia Fordii**, n. sp.

Species *B. retusæ* simillima, sed foliis omnino glabris, venis ultimis minus distincte reticulatis, drupis oblongo-ovoideis.

KWANGTUNG: without locality (*Ford*, 249 & 254!). Herb. Kew.

Ford describes this as a tree 50 ft. high, and, except in the characters noted, is exceedingly like *B. retusa*, Spreng. (see Hook. f. Fl. Brit. Ind. v. p. 268), a species found all over tropical India, southward to Malacca and Ceylon.

2. **Bridelia tomentosa**, *Blume, Bijdr.* p. 597; *Muell. Arg. in DC. Prodr.* xv. 2, p. 501 (varietates plures); *Hook. f. Fl. Brit. Ind.* v. p. 271; *Benth. Fl. Hongk.* p. 309; *Seem. Bot. Voy. 'Herald,'* p. 410.

Bridelia Loureiri, *Hook. et Arn. Bot. Beech. Voy.* p. 211, excl. syn. *Lour.*, ex *Muell. Arg. in loc. sup. cit.*

SOUTH CHINA: without locality (*Millett*!): HONGKONG (*Wright*! *Seemann*! *Champion*!); FORMOSA: Taiwan (*Playfair*!). Mus. Brit.; Herb. Kew.

Central and Eastern tropical India, southward through the Malay Archipelago to Australia and in the Philippine Islands.

1. **Andrachne chinensis**, *Bunge*, *Enum. Pl. Chin. Bor.* p. 59; *Muell. Arg. in DC. Prodr.* xv. 2, p. 234; *Franch. Pl. David.* p. 265.

CHIHLI: mountains near Peking (*Bunge*! *Bretschneider*! *Bushell*! *David*! *Williams*!). Mus. Brit.; Herb. Kew.

2. **Andrachne cordifolia**, *Muell. Arg. in DC. Prodr.* xv. 2, p. 234; *Hook. f. Fl. Brit. Ind.* v. p. 283.

Leptopus cordifolius, *Dcne. in Jacquem. Voy. Bot.* p. 155, t. 156.

HUPEH: Changyang (*A. Henry*, 5243!). Herb. Kew.

Afghanistan and Western and Central Himalaya.

1. **Sauropus albicans**, *Blume*, *Bijdr.* p. 596; *Muell. Arg. in DC. Prodr.* xv. 2, p. 240; *Baill. Étude Gén. Euphorb.* p. 635, t. 27. figg. 19 et 20; *Hook. f. Fl. Brit. Ind.* v. p. 332.

SZECHUEN: mount Omei, 4500 to 5000 ft. (*Faber*!). Herb. Kew.

Eastern Himalayas to Ceylon and Malacca, and in Java and the Philippines.

2. **Sauropus**, sp.? Specimen fructiferum tantum.

KWANGTUNG: without locality (*Ford*, 166, coll. 1887!). Herb. Kew.

1. **Agyneia bacciformis**, *A. Juss. Tent. Euphorb.* p. 24; *Muell. Arg. in DC. Prodr.* xv. 2, p. 238; *Hook. f. Fl. Brit. Ind.* v. p. 285; *Wight, Ic. Pl. Ind. Or.* t. 1893.

Phyllanthus bacciformis, *Linn. Syst. Veg.* ed. 13, p. 707; *Benth. Fl. Hongk.* p. 310; *Hance in Journ. Linn. Soc.* xiii. p. 120; *Henriques in Bol. Soc. Brot.* iii. p. 142.

KWANGTUNG: Macao (*Silva* ex *Henriques*), mainland opposite Hongkong (*Lamont*!); HONGKONG (*Hance*!). Mus. Brit.

Bengal, South India, Ceylon, and Mauritius.

1. **Phyllanthus anceps**, *Benth. Fl. Hongk.* p. 311, vix *Vahl.*

Phyllanthus simplex, *var.* chinensis, *Muell. Arg. in DC. Prodr.* xv. 2, p. 391.

HONGKONG (*Wilford*, 66!). Herb. Kew.

We doubt this being the same as *P. simplex*, and therefore leave it under the name given it by Bentham.

[*Phyllanthus cantoniensis*, Schweigg. (Enum. Pl. Regiom. (1812), p. 54), has not been identified. *P. cantoniensis*, Zipp., *ex* Spanoghe (Linnæa, xv. (1841) p. 347), is the same as *P. Zippelianus*, Muell. Arg. (DC. Prodr. xv. 2, p. 433), and is a native of Timor.]

2. **Phyllanthus cinerascens,** *Hook. et Arn. Bot. Beech. Voy.* p. 211; *Seem. Bot. Voy. 'Herald,'* p. 410, t. 97; *Benth. Fl. Hongk.* p. 311; *Henriques in Bol. Soc. Brot.* iii. p. 142.

Phyllanthus fasciculatus, *Muell. Arg. in DC. Prodr.* xv. 2, p. 350.

Cathetus fasciculata, *Lour. Fl. Cochinch.* p. 608.

Phyllanthus cochinchinensis, *Spreng. Syst. Veg.* iii. p. 21.

KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Urquhart*! *Champion*! *Wright*! *Wilford*! *Hance*!). Mus. Brit.; Herb. Kew.

Cochinchina.

3. **Phyllanthus Emblica,** *Linn. Sp. Pl.* ed. 1, p. 982; *Muell. Arg. in DC. Prodr.* xv. 2, p. 352; *Benth. Fl. Hongk.* p. 312; *Hook. f. Fl. Brit. Ind.* v. p. 289; *Bretschn. Early Res.* p. 172.

Emblica officinalis, *Gærtn. Fruct.* ii. p. 122, t. 108; *Wight, Ic. Pl. Ind. Or.* t. 1896.

Dichelactina nodicaulis, *Hance in Walp. Ann.* iii. p. 376.

HONGKONG (*Champion*! *Wright*! *Hance*!); HAINAN (*A. Henry*, 8762!). Mus. Brit.; Herb. Kew.

Throughout tropical India and Malaya.

4. **Phyllanthus flexuosus,** *Muell. Arg. in DC. Prodr.* xv. 2, p. 324.

Cicca flexuosa, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* i. p. 35.

Hemicicca japonica, *Baill. Étude Gén. Euphorb.* p. 646, ex *Muell. Arg. l. c.* ergo Phyllanthus japonicus, *Muell. Arg. in Linnæa*, xxxii. p. 52, nomen a *Muell. in DC. Prodr.* non citatum.

Glochidion flexuosum, *Muell. Arg.* ex *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 128; *Franch. et Savat. Enum. Pl. Jap.* i. p. 426.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1206, 3420!). Herb. Kew.

Japan.

5. **Phyllanthus glaucus,** *Wall. Cat.* 7927, ex *Muell. Arg. in Linnæa*, xxxii. p. 14; *Hook. f. Fl. Brit. Ind.* v. p. 288.

Phyllanthus fluggeiformis, *Muell. Arg. in DC. Prodr.* xv. 2, p. 349.

KIANGSI: Kiukiang (*Maries* !). Herb. Kew.

Central and Eastern Himalaya and Assam.

6. **Phyllanthus leptoclados**, *Benth. Fl. Hongk.* p. 312; *Muell. Arg. in DC. Prodr.* xv. 2, p. 422; *Henriques in Bol. Soc. Brot.* iii. p. 142.

Epistylium leptoclados, *Hance in Ann. Sc. Nat.* 4me série, xviii. p. 229.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 432, 2722 !); FOKIEN: Amoy (*Hance*, 1436 !); KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Wright* !). Mus. Brit.; Herb. Kew.

7. **Phyllanthus maderaspatensis**, *Linn. Sp. Pl.* ed. 1, p. 982; *Benth. Fl. Hongk.* p. 311; *Muell. Arg. in DC. Prodr.* xv. 2, p. 362; *Hook. f. Fl. Brit. Ind.* v. p. 292.

HONGKONG (*Champion* !). Herb. Kew.

Tropical Asia, Africa, and Australia.

8. **Phyllanthus Niruri**, *Linn. Sp. Pl.* ed. 1, p. 981; *Muell. Arg. in DC. Prodr.* xv. 2, p. 406; *Benth. Fl. Hongk.* p. 311; *Hook. f. Fl. Brit. Ind.* v. p. 298; *Wight, Ic. Pl. Ind. Or.* t. 1894; *Debeaux, Fl. Tchef.* p. 127; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 252; *Henriques in Bol. Soc. Brot.* iii. p. 142.

FORMOSA: Apes' Hill, Taiwan (*Playfair* !); KWANGTUNG: Macao (*Silva* ex *Henriques*); HONGKONG (*Harland* ex *Bentham*). Herb. Kew.

Almost cosmopolitan in warm countries.

Debeaux records this from the province of Shantung, but, as Franchet points out, this northern plant is more likely to be *P. ussuriensis*, Rupr., a species affecting cooler regions than *P. Niruri*, Linn.

9. **Phyllanthus reticulatus**, *Poir. Encycl.* v. p. 298; *Muell. Arg. in DC. Prodr.* xv. 2, p. 344; *Hook. f. Fl. Brit. Ind.* v. p. 288.

Phyllanthus microcarpus, *Muell. Arg. in Linnæa,* xxxii. p. 51, et *in DC. Prodr.* xv. 2, p. 343; *Hance in Journ. Linn. Soc.* xiii. p. 121.

Cicca microcarpa, *Benth. Fl. Hongk.* p. 312.

Kirganelia sinensis, *Baill. Étude Gén. Euphorb.* p. 614.

Phyllanthus sinensis, *Muell. Arg. in Linnæa,* xxxii. p. 12.

Phyllanthus myrtifolius, *Wall. Cat.* 7940.

FORMOSA: Takow (*Hance*, 11707 !), Takow, Apes' Hill (*Playfair* !); KWANGTUNG: near Canton (*Sampson* !), Pakhoi (*Playfair* !), Whampoa (*Hance*!); HONGKONG (*Wright*! *Wilford*!). Mus. Brit.; Herb. Kew.

Widely spread in tropical Asia and Africa. Also Australia, according to Mueller, *loc. cit.*

10. **Phyllanthus simplex,** *Retz. Obs. Bot.* v. p. 29; *Muell. Arg. in DC. Prodr.* xv. 2, p. 391; *Hook. f. Fl. Brit. Ind.* v. p. 295.

Phyllanthus anceps, *Vahl, Symb.* ii. p. 95, sed vix *Benth. Fl. Hongk.* p. 311; *Franchet, Pl. David.* p. 266.

Phyllanthus simplex, γ. chinensis, *Muell. Arg. in Linnæa,* xxxii. p. 33.

Phyllanthus ussuriensis, *Rupr.* ex *Regel, Veg. Skizz. Amur.* p. 490; *Franchet in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 251.

CHIHLI: near Peking (*Bretschneider*!); SHANTUNG: Chefoo mountains (*Faber*!); KIANGSU: hills near Shanghai (*Carles*!); FORMOSA: Takow (*Playfair*!); HUPEH: Ichang, Chienshih, and other localities (*A. Henry,* 4279, 7409, 8421!); KWANGTUNG (*Ford*!); HONGKONG (*Wright*!). Mus. Brit.; Herb. Kew.

Throughout India to Ceylon, Malaya, and Polynesia, and in Mongolia, Mandshuria, and Japan.

We have taken the species as limited by Mueller in De Candolle's 'Prodromus,' but the Chinese specimens are very uniform in appearance and belong to his varieties *chinensis* and *ussuriensis*, which are inseparable with numerous specimens under observation.

11. **Phyllanthus urinaria,** *Linn. Sp. Pl.* ed. 1, p. 982; *Muell. Arg. in DC. Prodr.* xv. 2, p. 364; *Hook. f. Fl. Brit. Ind.* v. p. 293; *Benth. Fl. Hongk.* p. 310; *Bretschn. Early Res.* p. 172; *Franch. et Savat. Enum. Pl. Jap.* i. p. 426; *Maxim. in Engl. Jahrb.* vi. p. 59; *Henriques in Bol. Soc. Brot.* iii. p. 142.

Phyllanthus cantoniensis, *Hornem. Enum. Pl. Hort. Hafn.* (1807), p. 29; *Kl. Pl. Mey. in Nov. Act. Nat. Cur.* xix. *Suppl.* i. p. 420.

Phyllanthus lepidocarpus, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* p. 35; *Miq. in Ann. Bot. Mus. Lugd.-Bat.* iii. p. 127.

Phyllanthus leprocarpus, *Wight, Ic. Pl. Ind. Or.* t. 1895. f. 4.

KIANGSU: Shanghai (*Maingay*!); FORMOSA (*Oldham,* 486!); HUPEH: Ichang and immediate neighbourhood (*A. Henry,* 2788!); KWANGTUNG (*Meyen*!). Mus. Brit.; Herb. Kew.

Widely dispersed in the tropics both in the Old World and in America.

[*Phyllanthus villosus,* Poir. (Lam. Encycl. v. p. 297), syn. *Nymphanthus chinensis,* Lour. (Fl. Cochinch. p. 544), recorded as a native of Canton, is placed by Mueller (DC. Prodr. xv. 2,

p. 433) among his species "*non satis notæ.*" Bretschneider (Early Res. p. 172) states that the Chinese name cited by Loureiro is the one employed at Canton for *P. urinaria*, Linn.]

1. **Glochidion Arnottianum**, *Muell. Arg. in Linnæa*, xxxii. p. 60.

Phyllanthus Arnottianus, *Muell. Arg. in DC. Prodr.* xv. 2, p. 279; *Hance in Journ. Linn. Soc.* xiii. p. 120.

Glochidion molle, *Hook. et Arn. Bot. Beech. Voy.* p. 210; *Benth. Fl. Hongk.* p. 314 (non *Blume*).

Bradleia mollis, *Steud. Nomencl. Bot.* ed. sec. p. 222.

CHINA: without locality (*Millett*!); FORMOSA: Tamsui (*Oldham*, 491!), Takow (*Playfair*, 420!); HONGKONG (*Wright*! *Wilford*! *Champion*! *Hance*!); HAINAN: Lingmen (*A. Henry*, 8612!). Mus. Brit.; Herb. Kew.

2. **Glochidion eriocarpum**, *Champ. in Hook. Kew Journ. Bot.* vi. p. 6; *Benth. Fl. Hongk.* p. 314.

Phyllanthus eriocarpus, *Muell. Arg. in Flora*, xlviii. p. 387, et *in DC. Prodr.* xv. 2, p. 306.

HONGKONG (*Wright*! *Champion*! *Wilford*! *Hance*!). Mus. Brit.; Herb. Kew.

3. **Glochidion Fortuni**, *Hance in Ann. Sc. Nat.* 4me série, xviii. p. 228.

Phyllanthus puberus, *a.* Fortuni, *Muell. Arg. in DC. Prodr.* xv. 2, p. 307.

CHINA: without locality, probably Amoy (*Fortune*, 41 and 129!); FOKIEN: Amoy (*Hance*, 1474!); FORMOSA: Tamsui and other localities (*Oldham*, 492, 493, 495, 502, 503!), Kelung (*Ford*, 66!), Apes' Hill, Taiwan (*Playfair*, 246!), without locality (*Swinhoe*!). Mus. Brit.; Herb. Kew.

See note under *Glochidion obovatum*.

4. **Glochidion hongkongensis**, *Muell. Arg. in Linnæa*, xxxii. p. 60.

Glochidion littorale, *Benth. Fl. Hongk.* p. 314, non *Blume* ex *Muell. Arg. l. c.*

Phyllanthus hongkongensis, *Muell. Arg. in Flora*, xlviii. p. 371, et *in DC. Prodr.* xv. 2, p. 282; *Hance in Journ. Linn. Soc.* xiii. p. 120.

FORMOSA: Tamsui and other localities (*Oldham*, 487, 488, 489, 490, 494!), Takow (*Playfair*!); HONGKONG (*Wright*! *Hance*! *Wilford*! *Urquhart*!); HAINAN (*A. Henry*, 8340!). Mus. Brit.; Herb. Kew.

5. **Glochidion macrophyllum,** *Benth. in Hook. Lond. Journ. Bot.* i. p. 491, et *Fl. Hongk.* p. 315, non *Muell. Arg.*

Phyllanthus Benthamianus, *Muell. Arg. in Flora,* xlviii. p. 371, et *in DC. Prodr.* xv. 2, p. 282; *Hance in Journ. Linn.* Soc. xiii. p. 120.

Glochidion cantoniense, *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 241.

KWANGTUNG: Whampoa (*Hance*, 7795!); HONGKONG (*Hinds*!); HAINAN (*A. Henry*, 8557, 8760!). Mus. Brit.; Herb. Kew.

This is perhaps not distinct from *G. littorale*, Blume, a species inhabiting Southern India, Ceylon, and the Malay Archipelago.

6. **Glochidion obovatum,** *Sieb. et Zucc. in Abhandl. Akad. Muench.* iv. 2, p. 143.

Phyllanthus obovatus, *Muell. Arg. in Flora,* xlviii. p. 387, et *in DC. Prodr.* xv. 2, p. 307.

Bradleia sinensis, *Sieb.* ex *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 128.

LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

Glochidion Fortuni, Hance, should perhaps be referred to this. Indeed Mueller (in DC. Prodr. xv. 2, p. 307) cites Fortune's no. 41 under this species, though that number in the Kew Herbarium is certainly typical *G. Fortuni.* Baillon (Étude Gén. Euphorb. p. 638) refers Fortune's no. 45 to *G. obovatum*—a number not found at Kew.

7. **Glochidion obscurum,** *Blume, Bijdr.* p. 585; *Hook. f. Fl. Brit. Ind.* v. p. 317.

Phyllanthus obscurus, *Willd. Sp. Pl.* iv. p. 581; *Muell. Arg. in DC. Prodr.* xv. 2, p. 287.

Glochidion Roxburghianum, *Muell. Arg. in Linnæa,* xxxii. p. 61.

Glochidion sinicum, *Hook. et Arn. Bot. Beech. Voy.* p. 210; *Benth. Fl. Hongk.* p. 314; *Henriques in Bol. Soc. Brot.* iii. p. 142.

Phyllanthus puberus, *Muell. Arg. in Flora,* xlviii. 1865, p. 387, et *in DC. Prodr.* xv. 2, p. 307, excl. *a.* Fortuni.

Glochidion distichum, *Hance in Ann. Sc. Nat.* 4^{me} série, xviii. p. 228.

Agyneia pubera, *Linn. Mant.* ii. p. 296.

Agyneia impubes, *Linn. l. c.*

Agyneia pinnata, *Miq. Fl. Ind. Bat.* i. 2, p. 368.

Agyneia sinica, *Miq. Fl. Ind. Bat.* i. 2, p. 368.

Bradleia sinica, *Gærtn. Fruct.* ii. p. 127, t. 109. f. 1.

Bradleia pinnata, *Roxb. Fl. Ind.* iii. p. 700.

KIANGSU: Shanghai (*Carles*!); CHEKIANG: Ningpo (*Carles*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang, Nanto, and other localities (*A. Henry*, 242, 243, 1020, 1532, 3050!); SZE-

CHUEN: Wushan to Omei (*Faber*, 813!), Chungking (*Bourne*!), without locality (*Mesny*); KWANGTUNG: Macao, Whampoa, and other localities (*Millett*! *Vachell*! *Hance*, 6060! *Tate*! *Callery*! *Ford*!); HONGKONG (*Wright*!). Mus. Brit.; Herb. Kew.

Malay peninsula and archipelago.

8. **Glochidion philippinense,** *Benth. Fl. Hongk.* p. 314.

Phyllanthus philippinensis, *Muell. Arg. in Flora,* xlviii. 1865, p. 376, et *in DC. Prodr.* xv. 2, p. 295, saltem quoad nomen.

HONGKONG (*Wright*!). Herb. Kew.

Philippine Islands.

9. **Glochidion villicaule,** *Hook. f. Fl. Brit. Ind.* v. p. 326.

YUNNAN: Ponsee (*Anderson*!). Herb. Kew.

Malay peninsula.

10. **Glochidion Wrightii,** *Benth. Fl. Hongk.* p. 313.

Phyllanthus Wrightii, *Muell. Arg. in Flora,* xlviii. 1865, p. 378, et *in DC. Prodr.* xv. 2, p. 298.

HONGKONG (*Wright*!). Herb. Kew.

1. **Securinega fluggeoides,** *Muell. Arg. in DC. Prodr.* xv. 2, p. 450.

Securinega japonica, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 128; *Franch. et Savat. Enum. Pl. Jap.* i. p. 425.

SHINGKING: various localities (*James*! *Ross*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang and other localities (*A. Henry*, 59, 1604, 1620, 1686, 3557, 7709!); COREAN ARCHIPELAGO: Herschel Island (*Oldham*, 739!). Mus. Brit.; Herb. Kew.

Japan.

2. **Securinega ramiflora,** *Muell. Arg. in DC. Prodr.* xv. 2, p. 449; *Baker & Moore in Journ. Linn. Soc.* xvii. p. 386.

Fluggea suffruticosa, *Baill. Étude Gén. Euphorb.* p. 592; *Franchet, Pl. David.* p. 266, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 252.

Xylophylla ramiflora, *Ait. Hort. Kew.* i. p. 376.

Phyllanthus ramiflorus, *Pers. Syn.* ii. p. 591.

Geblera suffruticosa, *Fisch. et Mey. Ind. Sem. Hort. Petrop.* 1835, p. 28.

CHIHLI: various localities near Peking (*Bunge*! *Williams*! *Bretschneider*!); SHINGKING: Chienshan (*Ross*!); SHANTUNG: Chefoo mountains (*Faber*!). Mus. Brit.; Herb. Kew.

Siberia and Mandshuria.

1. **Fluggea microcarpa,** *Blume, Bijdr.* p. 580; *Hook. f. Fl. Brit. Ind.* v. p. 328.

Securinega obovata, *Muell. Arg. in DC. Prodr.* xv. 2, p. 449; *Benth. Fl. Austral.* vi. p. 115.

Fluggea sinensis, *Baill. Étude Gén. Euphorb.* p. 592.

Formosa: Tamsui (*Oldham*, 500, 501!), Takow (*Playfair*, 460, 461!); Hupeh: Ichang and other localities (*A. Henry*, 622, 818!); Kwangtung: West river (*Sampson*!); Whampoa (*Hance*, 11231!), Lofaushan (*Ford*, 8, 24, 164!). Mus. Brit.; Herb. Kew.

Tropical and subtropical Asia, tropical Africa and Australia.

1. **Breynia fruticosa,** *Hook. f. Fl. Brit. Ind.* v. p. 331.

Andrachne fruticosa, *Linn. Sp. Pl.* ed. 1, p. 1014.

Phyllanthus lucens, *Poir in Lam. Encycl.* v. p. 296; *Hook. et Arn. Bot. Beech. Voy.* p. 210.

Melanthesa chinensis, *Blume, Bijdr.* p. 592; *Benth. Fl. Hongk.* p. 313; *Henriques in Bol. Soc. Brot.* iii. p. 142.

Melanthesa cernua, *Benth. in Hook. Lond. Journ. Bot.* i. p. 491, non *Dcne.*

Melanthesopsis fruticosa, *Muell. Arg. in DC. Prodr.* xv. 2, p. 437, excl. syn. Melanthesa reclinata, *Muell. Arg.* fide *Hook. f. loc. cit.*

Phyllanthus turbinatus, *Sims in Bot. Mag.* t. 1862, non *Kœn.*

Melanthesa glaucescens, *Miq. in Journ. Bot. Néerl.* i. p. 97?

Kwangtung: various localities (*Millett*! *Meyen*! *Wykeham Perry*! *Ford*!); Hongkong (*Wright*! *Wilford*! *Seemann*! *Champion*!); Hainan (*A. Henry*, 8045, 8775!). Mus. Brit.; Herb. Kew.

Malay archipelago.

√ 2. **Breynia officinalis,** *Hemsl.*, n. sp.

Arbor (fide *Watters*), *frutex* (fide *Playfair*) glaber, ut videtur dense ramosus, ramulis ultimis gracillimis, internodiis brevissimis. *Folia* disticha, breviter petiolata, papyracea, oblonga, elliptica, vel interdum fere orbicularia, cum petiolo usque ad 1¼ poll. longa, sed sæpius minora, obtusissima vel rotundata, subtus pallidiora, subglauca, venis primariis utrinque 3–4, subtus sat conspicuis, stipulis minutis acutis. *Flores* virides (*Playfair*), utriusque sexus solitarii, axillares vel pseudoracemosi: *fl.* ♂ graciliter pedicellati, pedicellis 3–4 lineas longis, perianthium fere truncatum, infractum, stamina 3; *fl.* ♀ brevissime pedicellati, perianthium fructiferum non auctum, dentibus brevissimis; gynæcium exsertum, glabrum, truncatum, apice excavatum.

Bacca coccinea (*Playfair*), 1½–2 lineas diametro. — Breynia patens, *Rolfe in Journ. Bot.* 1882, p. 359, *non* Melanthesopsis patens, *Muell. Arg.*

FORMOSA: Tamsui (*Oldham*, 483, 484, 485! *Watters*, 41!), Apes' Hill (*Playfair*!). Mus. Brit.; Herb. Kew.

"The tree called Shan-ch'i-chin. The leaves and root are used to make a wash, which is said to be effectual in removing blisters caused by paint and varnish."—*Watters.*

3. **Breynia rhamnoides**, *Muell. Arg. in DC. Prodr.* xv. 2, p. 440, excl. varietates α et γ, *fide Hook. f. Fl. Brit. Ind.* v. p. 330.

Melanthesa rhamnoides, *Wight, Ic. Pl. Ind. Or.* t. 1898.

Phyllanthus rhamnoides, *Retz.*; *Hook. et Arn. Bot. Beech. Voy.* p. 270.

CHEKIANG: Ningpo mountains (*Faber*, 98!): HUPEH: Ichang, Patung, and other localities (*A. Henry*, 1531, 1589, 1633, 3578, 4258, 7304!); LUCHU ARCHIPELAGO (*Beechey*! *Wright*!). Mus. Brit.; Herb. Kew.

Widely spread in tropical Asia.

1. **Bischofia javanica**, *Blume, Bijdr.* p. 1168; *Benth. Fl. Hongk.* p. 316; *Maxim. in Engl. Jahrb.* vi. p. 59; *Muell. Arg. in DC. Prodr.* xv. 2, p. 478; *Hook. f. Fl. Brit. Ind.* v. p. 345.

Bischofia trifoliata, *Hook. Ic. Pl.* t. 844.

Stylodiscus trifoliatus, *Benn. Pl. Jav. Rar.* p. 133, t. 29.

Bischofia oblongifolia, *Decne. in Jacquem. Voy. Bot.* t. 154.

FORMOSA: Tamsui (*Oldham*, 496!), Apes' Hill (*Playfair*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1558, 1558 A, 3097!); KWANGTUNG: without locality (*Ford*, 351!); HONGKONG (*Harland*! *Wright*! *Wilford*!); HAINAN (*A. Henry*, 8127!); LUCHU ARCHIPELAGO (*Wright*! *Döderlein* ex *Maximovicz*). Mus. Brit.; Herb. Kew.

India, Malaya, and Polynesia.

"A very large deciduous tree; the Wu yang."—*A. Henry.*

1. **Aporosa lanceolata**, *Hance in Journ. Bot.* 1879, p. 14, vix *Thwaitesii.*

KWANGTUNG: in woods above the monastery, Tingushan (*Sampson*!), along the West river (*Lamont*, hb. *Hance*, 7810!). Mus. Brit.; Herb. Kew.

Only the female is known, and we greatly doubt its being the same as the Ceylon plant.

2. **Aporosa leptostachya,** *Benth. Fl. Hongk.* p. 317.

Aporosa frutescens, *Benth. loc. cit., an eadem ac* A. frutescens, *Blume ?*

Aporosa microcalyx, *Hassk.,* var. β. chinensis, *Muell. Arg. in DC. Prodr.* xv. 2, p. 472.

Aporosa sinensis, *Baill. Étude Gén. Euphorb.* p. 645.

Scepa chinensis, *Champ. in Hook. Kew Journ. Bot.* vi. (1854), p. 72.

KWANGTUNG: Pakhoi (*Playfair* !), Lofaushan (*Ford* !); HONGKONG (*Wright* ! *Champion* ! *Wilford* ! and many other collectors); HAINAN (*B. C. Henry* ! *A. Henry*, 8495 !). Mus. Brit.; Herb. Kew.

1. **Daphniphyllum calycinum,** *Benth. Fl. Hongk.* p. 316; *Muell. Arg. in DC. Prodr.* xvi. 1, p. 4.

Daphniphyllum Calleryanum, *Baill., et* D. Gaudichaudianum, *Baill. Étude Gén. Euphorb.* p. 565 (nomina nuda).

KWANGTUNG: Macao and other localities (*Reeves* ! *Callery* ! *Gaudichaud* !); HONGKONG (*Wilford* ! *Champion* ! *Seemann* !); HAINAN: Lingmen (*A. Henry* !). Mus. Brit.; Herb. Kew.

2. **Daphniphyllum glaucescens,** *Blume, Bijdr.* p. 1153; *Muell. Arg. in DC. Prodr.* xvi. 1, p. 3; *Franch. et Savat. Enum. Pl. Jap.* i. p. 427, ii. p. 488; *Hook. f. Fl. Brit. Ind.* v. p. 353; *Hance in Journ. Linn. Soc.* xiii. p. 120; *Maxim. in Engl. Jahrb.* vi. p. 59.

Daphniphyllum Roxburghii, *Baill. Étude Gén. Euphorb.* p. 565, excl. syn. *Roxb.,* fide *Mueller, loc. cit.*; *Benth. Fl. Hongk.* p. 316.

Gomphia neilgherrensis, *Wight, Ic. Pl. Ind. Ord.* t. 1878-9; *Benth. in Hook. Kew Journ. Bot.* vi. p. 8.

CHEKIANG: Tientai mountains (*Faber* !); HONGKONG (*Wright* *Champion* !); COREAN ARCHIPELAGO: Port Hamilton (*Wilford*, 664 !); LUCHU ARCHIPELAGO (*Wright* !). Mus. Brit.; Herb. Kew.

Japan, South India, and Ceylon.

Var. ? **Oldhami,** *Hemsl.,* foliis acutissime acuminatis subtus pallidioribus sed non glaucescentibus, fructibus minoribus.

FORMOSA: Tamsui (*Oldham*, 497 !). Herb. Kew.

There is only a single specimen of this in the Kew Herbarium, and that bears immature fruit only.

3. **Daphniphyllum macropodum,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 129; *Muell. Arg. in DC. Prodr.* xvi. 1, p. 5.

CHEKIANG: Tientai mountains (*Faber* !); HUPEH: Chienshih

(*A. Henry*, 5673 A!); SZECHUEN: North and South Wushan (*A. Henry*, 5673, 7102!), mount Omei (*Faber*, 91!). Mus. Brit.; Herb. Kew.

Japan.

✓ 1. **Antidesma apiculatum**, *Hemsl.*, n. sp.

Frutex ramulis pubescentibus. *Folia* brevissime petiolata, papyracea, glabra, anguste lanceolata, 6–9 poll. longa, maxima sesquipoll. lata, basi subcuneata, costa subtus elevata apice excurrenti apiculum formanti, venis primariis lateralibus utrinque circiter 10 curvatis inter se eximie connexis; petiolus crassiusculus, vix 3 lineas longus; stipulæ non visæ. *Racemi* fl. ♀ simplices, solitarii vel bini, quam folia breviores, densiflori, pedicellis gracilibus glabris 2–3 lineas longis; bracteolæ minutissimæ, acutissimæ. *Perianthium* fl. ♀ parvum, glabrum, sæpius trilobum, interdum lobo quarto minore, lobis ovato-lanceolatis subacutis patentibus. *Fructus* glaber, brevissime stipitatus, anguste ovoideus, leviter obliquus, rugosus, circiter 3 lineas longus.

HAINAN: without locality (*A. Henry*, 8512! *B. C. Henry*, 36!). Herb. Kew.

Characterized by long, narrow, apiculate leaves, and a narrow, shortly stipitate fruit. Male flowers not seen.

2. **Antidesma Bunius**, *Spreng. Syst. Veg.* i. p. 826; *Muell. Arg. in DC. Prodr.* xv. 2, p. 262; *Benth. Fl. Hongk.* p. 318; *Hook. f. Fl. Brit. Ind.* v. p. 358.

KWANGTUNG: near Hwangchuki (*Sampson*, hb. *Hance*, 15726!); HONGKONG (*Champion*!); HAINAN (*A. Henry*, 8316!). Mus. Brit.; Herb. Kew.

India and Malaya.

✓ 3. **Antidesma Fordii**, *Hemsl.*, n. sp.

Species *A. velutinoso* simillima, a qua differt stipulis amplis petiolis longioribus venis primariis paucioribus etc.

Ramuli fructiferi rufo-tomentosi. *Folia* petiolata, crassiuscula, papyracea, oblonga, vel interdum fere elliptica, 3–6½ poll. longa, vix acute acuminata, basi subrotundata, supra glabra vel cito glabrescentia, subtus molliter rufo-pubescentia, venis primariis lateralibus utrinque circiter 10 subtus elevatis cum secundariis conspicuis crebris fere rectis connexis; petiolus teres, pubescens, 6–9 lineas longus; stipulæ oblique ovatæ, acuminatæ, 6–8 lineas longæ, longitudinaliter conspicue striato-venosæ, cito deciduæ.

Racemi fl. ♀ tum axillares, simplices, quam folia breviores, tum terminales, cum ramulis secundariis, quam folia longiores, pedicellis crassiusculis vix lineam longis bracteolas superantibus. *Perianthium* ♀ minutum, pubescens, brevissime 5-lobum. *Fructus* compressus, valde rugosus, parce hispidulus, 2½–3 lineas longus.

Kwangtung: Lofaushan, at 800 feet (*Ford*, 57, coll. 1883 !), without locality (*Ford*, 163, coll. 1887 !). Herb. Kew.

4. **Antidesma Ghaesembilla,** *Gærtn. Fruct.* i. p. 189, t. 39; *Muell. Arg. in DC. Prodr.* xv. 2, p. 251; *Hook. f. Fl. Brit. Ind.* v. p. 357.

Antidesma paniculatum, *Roxb. Fl. Ind.* iii. p. 770; *Benth. Fl. Hongk.* p. 318.

Kwangtung: Pakhoi (*Playfair* !); Hongkong (*Champion* !); Hainan: without locality (*A. Henry*, 8099, 8100, 8371, 8488 !). Herb. Kew.

India, Malaya, tropical Australia, and Africa.

5. **Antidesma gracile,** *Hemsl.*, n. sp.

Species ad *A. japonicum* accedit, sed foliis pallidis, drupa anguste ovoidea, etc. *Ramuli* graciles, glabri vel citissimo glabrescentes, cortice cinereo. *Folia* breviter petiolata, membranacea, oblongo-lanceolata, 2–4 poll. longa, acuminata simul apiculata, basi obtusa vel rotundata, rarius subcuneata, glabra, venis primariis lateralibus utrinque circiter 6 arcuatis subtus leviter elevatis; petiolus 2–3 lineas longus, pilis paucissimis primum instructus; stipulæ lineares, acutæ, petiolum subæquantes, cito deciduæ. *Racemi* fl. ♀ graciles, axillares, solitarii, vel terminales et interdum aggregati, folia æquantes vel breviores, pedicellis gracilibus 1–1½ lineam longis; bracteolæ minutissimæ. *Perianthium* fl. ♀ glabrum, tenue, 4-lobum, lobis rotundatis. *Drupa* pulverulenta, ovoidea, circiter 2½ lineas longa.

Kwangtung: without locality (*Ford*, 258, coll. 1887 !). Herb. Kew.

A very similar species was collected by Faber on mount Omei, Szechuen (56 and 68), but the material is insufficient.

6. **Antidesma Henryi,** *Hemsl.*

Frutex 12-pedalis (fide *B. C. Henry*), ramulis floriferis pubescentibus. *Folia* brevissime petiolata, subcoriacea, oblongo-lanceolata, 3–7 poll. longa, maxima circiter 2 poll. lata, abrupte acuteque acuminata, basi cuneata, utrinque primum secus costam et subtus secus venas primarias parce puberula, cæterum glabra, venis primariis lateralibus utrinque 6–8 curvatis subtus conspicuis et inter se insigniter anastomosantibus; petiolus pubescens, crassus, circiter sesquilineam longus; stipulæ lineares, acutæ, petiolum excedentes. *Racemi* sæpius terminales, pubescentes, fl. ♂ paniculati, fl. ♀ simplices, solitarii vel bini, omnes folia æquantes vel superantes. *Flores* ♂ conferti, brevissime pedicellati, bracteolis minutis; perianthium 4-lobatum, tenue, puberulum, lobis ovatis acutis; stamina 4 cum glandulis oblongis alternantia; ovarii rudimentum clavatum. *Flores* ♀ conferti, breviter pedicellati, pedicellis crassiusculis bracteolas acutas æquantibus; perianthium maris sed majus, lobis erectis ovarium fere involventibus; discus annulatus, prominens; ovarium glabrum. *Fructus* oblongus, leviter rugosus, circiter 2 lineas longus.

HAINAN: without locality (*A. Henry*, 8562! *B. C. Henry*, 35 and 57!). Herb. Kew.

This species is named in the joint memory of Dr. A. Henry and the Rev. B. C. Henry, who both collected it, as well as *A. apiculatum*, Hemsl.

7. **Antidesma japonicum**, *Sieb. et Zucc. in Abhandl. Baier. Akad.* iv. 3 (1846), p. 212; *Muell. Arg. in DC. Prodr.* xv. 2, p. 258; *Benth. Fl. Hongk.* p. 318, et *in Hook. Kew Journ. Bot.* vi. p. 73; *Maxim. in Engl. Jahrb.* vi. p. 59.

FORMOSA: Tamsui (*Oldham*, 505!); HONGKONG (*Wright*! *Champion*! *Wilford*! *Hance*!); LUCHU ARCHIPELAGO (*Döderlein* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

Japan.

8. **Antidesma microphyllum**, *Hemsl.*, n. sp.

Ramuli graciles, primum puberuli, demum glabrescentes. *Folia* conferta (internodiis quam folia multoties brevioribus), brevissime petiolata, subcoriacea, anguste lanceolata, 1–3 poll. longa, sed sæpius circiter bipollicaria, obtusa simul apiculata, basi subcuneata vel obtusa, supra præter costam plus minusve hispidulam et marginem minute ciliolatum glabra, subtus secus costam pilis paucis prædita, demum utrinque omnino glabrescentia; petiolus pubescens, 1½–2 lineas longus; stipulæ lineares, acutæ, quam petiolus duplo longiores, cito deciduæ. *Racemi* fl. ♀ axillares, simplices, vel terminales, pauciramosi, quam folia breviores, pubescentes, densiflori, pedicellis crassis brevissimis; bracteolæ minutissimæ. *Perianthium* fl. ♀ glabrum,

alte 4–5-lobum, lobis rotundatis. *Fructus* glaber, ovoideus, rugosus, circiter sesquilineam longus.

SZECHUEN: Hokiang (*Faber*, 97 !). Herb. Kew.

Characterized by small, narrow, crowded leaves and short, dense racemes.

1. **Microdesmis caseariæfolia**, *Planch. in Hook. Ic. Pl.* ad t. 758; *Muell. Arg. in DC. Prodr.* xv. 2, p. 1041; *Hook. f. Fl. Brit. Ind.* v. p. 380; *Hance in Journ. Bot.* 1882, p. 38.

KWANGTUNG: various localities (*Reeves*! *Sampson*! *Ford*!); HAINAN (*A. Henry*, 8550!). Mus. Brit.; Herb. Kew.

Tenasserim, Malacca, Perak, Borneo, and Cochinchina.

[*Jatropha Curcas*, Linn., an American shrub or small tree, is naturalized in South China and Formosa.]

1. **Aleurites cordata**, *Steud. Nomencl. Bot.* ed. 2, i. p. 49; *Muell. Arg. in DC. Prodr.* xv. 2, p. 724; *Bretschn. Early Res.* pp. 34 et 172, *et N. China Herald*, Jan. 18, 1881; *Flückiger & Hanbury, Pharmacographia*, p. 81, in footnote; *Gard. Chron.* Apr. 1, 1871, p. 412; *Bull. de la Soc. d'Acclim.* 1881, p. 617, et 1888, p. 174.

Elæococca cordata, *Blume, Bijdr.* p. 618; *Franch. et Savat. Enum. Pl. Jap.* i. p. 425.

Dryandra cordata, *Thunb. Fl. Jap.* p. 267.

Dryandra oleifera, *Lam. Encycl.* ii. p. 329.

Vernicia montana, *Lour. Fl. Cochinch.* p. 587.

Dryandra Vernicia, *Correa in Ann. Mus. Par.* viii. p. 69, t. 32.

Elæococca cordata, E. Vernicia, *et* E. verrucosa, *A. Juss. Euphorb. Tent.* p. 88, t. 11, et *Spreng. Syst. Veg.* iii. p. 884.

Aleurites Vernicia, *Hassk. in Flora*, xxv. *Beibl.* 2, p. 40.

Aleurites japonica, *Blume* ex *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iv. p. 120.

Aleurites verniciflua, *Baill. Hist. de Pl.* v. p. 116.

CHEKIANG: Ningpo (*Everard*! *Hancock*!); KIANGSI: Lushan (*Maries*! *Shearer*! *Bullock*!); FOKIEN: Amoy (*Fortune*, 33!); FORMOSA: Tamsui (*Oldham*, 504!); HUPEH: Ichang, cultivated (*A. Henry*, 878!); SZECHUEN: South Wushan (*A. Henry*, 5856, 5856 A!); HONGKONG: cultivated (*Urquhart*! *Ford*!); HAINAN (*A. Henry*, 8639, 8756!). Mus. Brit.; Herb. Kew.

Japan.

This is the *Tung shu* of the Chinese, which yields the Wood-Oil (*Tung yu*) of China, sometimes called Ningpo Varnish. It is very extensively used for caulking, painting, and varnishing, and for preserving woodwork generally.

2. **Aleurites triloba,** *Forst. Char. Gen.* p. 112, n. 56, cum icone, et *Forst. f. Fl. Ins. Austral. Prodr.* p. 68; *Lam. Illustr.* t. 791.

Aleurites moluccana, *Willd. Sp. Pl.* iv. p. 590; *Muell. Arg. in DC. Prodr.* xv. 2, p. 723; *Hook. f. Fl. Brit. Ind.* v. p. 384; *Hanbury, Sc. Pap.* p. 231.

Juglans Camirium, *Lour. Fl. Cochinch.* p. 702.

Camirium cordifolium, *Gærtn. Fruct.* ii. p. 195, t. 125. fig. 2; *Drake, Fl. Polyn. Franç.* p. 183.

Aleurites cordifolia, *Steud. Nomencl.* ii. 1, p. 49.

CHINA: without locality (ex herb. *Lamb.* in herb. DC.; fide *Muell. Arg.* loc. cit.); HAINAN (*A. Henry*, 8336*!). Herb. Kew.

Eastern India, Malaya, Polynesia, and tropical Australia. Naturalized in the tropics of the New World.

[*Croton aromaticus*, Lour. (Fl. Cochinch. p. 583), "*habitat incultum circa Cantonem Sinarum*," is a doubtful plant; and we have seen nothing corresponding to the *C. aromaticus*, Linn.; *C. congestus*, Lour. (Fl. Cochinch. p. 582), Mueller includes (DC. Prodr. xv. 2, p. 696) among his "*species excludendæ, sed nondum recognitæ.*"]

1. **Croton crassifolius,** *Geisel. Crot. Monogr.* p. 19.

Croton chinensis, *Benth. Fl. Hongk.* p. 309; *Hance in Journ. Linn. Soc.* xiii. p. 121.

Croton tomentosus, *Muell. Arg. in Linnæa*, xxiv. p. 107, et *in DC. Prodr.* xv. 2, p. 588.

Tridesmis tomentosa, *Lour. Fl. Cochinch.* p. 576.

FOKIEN: Amoy (*Hance*, 1132!): HONGKONG (*Wright*! *Harland*! *Wilford*!). Mus. Brit.; Herb. Kew.

2. **Croton Cumingii,** *Muell. Arg. in Linnæa*, xxxiv. p. 101, et *in DC. Prodr.* xv. 2, p. 566.

Croton polystachyus, *Hook. et Arn. Bot. Beech. Voy.* p. 270.

FORMOSA: Tamsui (*Oldham*, 482!), south side (*A. Hance*!), Apes' Hill (*Playfair*!); LUCHU ARCHIPELAGO (*Beechey*! *Wright*!). Mus. Brit.; Herb. Kew.

3. **Croton Hancei,** *Benth. Fl. Hongk.* p. 308; *Muell. Arg. in DC. Prodr.* xv. 2, p. 574.

Croton longifolius, *Seem. Bot. Voy. 'Herald,'* p. 410, non *Wall.*

HONGKONG (*Hance*!). Mus. Brit.

4. **Croton Kroneanus**, *Miq. in Journ. Bot. Néerl.* i. p. 97.

KWANGTUNG: Hoan (*Krone* ex *Miquel*).

Probably the same as *C. lachnocarpus*, Benth.

5. **Croton lachnocarpus**, *Benth. in Hook. Kew Journ. Bot.* vi. p. 5, et *Fl. Hongk.* p. 308; *Muell. Arg. in DC. Prodr.* xv. 2, p. 624.

KWANGTUNG: without locality (*Millett*! *Reeves*!), Lofaushan (*Ford*!); HONGKONG (*Champion*! *Wright*! *Hance*, 423!). Mus. Brit.; Herb. Kew.

6. **Croton lævigatus**, *Vahl, Symb. Bot.* ii. p. 97; *Muell. Arg. in DC. Prodr.* xv. 2, p. 523.

HAINAN (*Dahl* in hb. Vahl, nunc in hb. Hafn., ex *Mueller*).

7. **Croton Tiglium**, *Linn. Sp. Pl.* ed. 1, p. 1004; *Muell. Arg. in DC. Prodr.* xv. 2, p. 600; *Hook. f. Fl. Brit. Ind.* v. p. 393.

FORMOSA: north-east end (*Wilford*, 555!); HUPEH: Nanto and mountains to northward (*A. Henry*, 4402!); SZECHUEN: below Hokiang and other localities (*Faber*, 94 and 181!); KWANGTUNG: Lantao island (*Ford*!), Pakhoi (*Playfair*!). Mus. Brit.; Herb. Kew.

Eastern India and Malaya.

[*Tridesmis hispida*, Lour. (Fl. Cochinch. p. 576), from Canton, "*videtur species Crotonis*," Mueller in DC. Prodr. xv. 2, p. 1256.]

1. **Blachia Pentzii**, *Benth. in Journ. Linn. Soc.* xvii. p. 226.

Codiæum Pentzii, *Muell. Arg. in DC. Prodr.* xv. 2, p. 1118.

Codiæum umbellatum, *Hance in Journ. Bot.* 1870, p. 314, non *Muell. Arg.*

KWANGTUNG: Paksha, on the extreme southern coast (*Hance*, 1703!); HAINAN (*Swinhoe*! *A. Henry*, 8726!). Mus. Brit.; Herb. Kew.

1. **Speranskia Henryi**, *Oliver in Hook. Ic. Pl.* t. 1577.

Argyrothamnia cantonensis, *Hance in Journ. Bot.* 1878, p. 14.

HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 1273, 1372, 1972, 2891!); KWANGTUNG: North river (*Bullock*, hb. *Hance*, 19955!). Mus. Brit.; Herb. Kew.

2. **Speranskia tuberculata,** *Baill. Étude Gén. Euphorb.* p. 389.

Croton tuberculatus, *Bunge, Enum. Pl. Chin. Bor.* p. 60.

Argyrothamnia tuberculata, *Muell. Arg. in Linnæa,* xxxiv. p. 144, et *in DC. Prodr.* xv. 2, p. 734; *Franchet, Pl. David.* p. 263.

CHIHLI: neighbourhood of Peking (*Bunge*! *Williams*! *Bullock*!). Mus. Brit.; Herb. Kew.

Mongolia.

1. **Claoxylum indicum,** *Hassk. Hort. Bogor. Alt.* p. 235; *Muell. Arg. in DC. Prodr.* xv. 2, p. 782; *Hook. f. Fl. Brit. Ind.* v. p. 410.

Claoxylum parviflorum, *Hook. et Arn. Bot. Beech. Voy.* p. 212 (excl. syn.), et *Benth. Fl. Hongk.* p. 305, non *Juss.*

KWANGTUNG: Lofaushan (*Ford*!); HONGKONG (*Wilford*! *Wright*! *Hance*, 1507!); HAINAN (*A. Henry*, 8018, 8767!). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya.

1. **Mercurialis leiocarpa,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* p. 37; *Muell. Arg. in DC. Prodr.* xv. 2, p. 795; *Franch. et Savat. Enum. Pl. Jap.* i. p. 425.

HUPEH: Patung district and other localities (*A. Henry*, 3714, 5229!); COREAN ARCHIPELAGO: Port Hamilton (*Wilford*, 704! *Oldham*, 743!). Mus. Brit.; Herb. Kew.

Japan.

1. **Acalypha acmophylla,** *Hemsl.*, n. sp.

Frutex (fide *Henry*), ramis ramulisque elongatis rectis gracilibus, primum parce puberulis, demum glabrescentibus. *Folia* tenuia, fere membranacea, longe graciliterque petiolata, ovata, absque petiolo, 2–4 poll. longa, longissime acuteque acuminata, grosse serrato-crenata, utrinque cito glabrescentia, minute creberrimeque pustulata, triplinervia; petiolus filiformis, usque ad 2 poll. longus sed sæpius brevior. *Racemi* (vel spicæ) axillares, solitarii, simplices, gracillimi, puberuli, petiolos sæpius paulo superantes, bracteolis minutis, prope basin flore solitario ♀ instructi. *Flores* ♂ minutissimi, fasciculati, glabri, pedicellis brevibus hirsutis. *Flos* ♀ intra bracteam oblique cupulatam inæqualiter obtuse lobulatam subsessilis; perianthii segmenta minuta, linearia; ovarium hispidum, stylis multifidis. *Capsula* matura ignota.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 627, 3587 !). Herb. Kew.

Dr. Henry's 1188 and 3824 from the same region may be the same species in a very young condition, although the inflorescence is sometimes branched from the base.

2. **Acalypha australis**, *Linn. Sp. Pl.* ed. 1, p. 1004.

Acalypha gemina, *Spreng. Syst. Veg.* iii. p. 880; *Muell. Arg. in DC. Prodr.* xv. 2, p. 866.

Acalypha pauciflora, *Hornem. Hort. Hafn.* ii. p. 909; *Maxim. Prim. Fl. Amur.* p. 240; *Franchet, Pl. David.* p. 264; *Deb. Fl. Tchef.* p. 126.

Acalypha chinensis, *Roxb. Fl. Ind.* iii. p. 677; *Hook. et Arn. Bot. Beech. Voy.* p. 213.

Acalypha virgata, *Thunb. Fl. Jap.* p. 268, non *Linn.*

Acalypha lanceolata, *Wall. Cat.* 7789.

CHIHLI: environs of Peking (*Williams*! *Bullock*! *David*!); SHINGKING: Moukden (*Webster*!); KIANGSU: Shanghai (*Faber*! *Carles*!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Patung and Ichang districts (*A. Henry*, 379, 2799, 2820!); KWANGTUNG: without locality (*Millett*! *Ford*!), Whampoa (*Hance*, 14709!). Mus. Brit.; Herb. Kew.

Mandshuria and Japan.

3. **Acalypha brachystachya**, *Hornem. Hort. Hafn.* ii. p. 909; *Muell. Arg. in DC. Prodr.* xv. 2, p. 870; *Hook. f. Fl. Brit. Ind.* v. p. 416; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477; *Franchet, Pl. David.* p. 264.

CHIHLI: Peking (*David* ex *Franchet*); SZECHUEN: North Wushan (*A. Henry*, 7061 !). Herb. Kew.

Temperate and tropical India, Java, and tropical Africa.

4. **Acalypha fallax**, *Muell. Arg. in Linnæa*, xxxiv. p. 43, et *in DC. Prodr.* xv. 2, p. 872; *Hook. f. Fl. Brit. Ind.* v. p. 416.

Acalypha hispida, *Wall., Blume, et auctor. plurimor.* non *Burm.* nec *Willd.*

Acalypha bœhmerioides, *Miq. in Ann. Mus. Bot. Lugd.-Bat. Suppl.* i. p. 459.

Acalypha hispida, β. pubescens, *Hook. et Arn. Bot. Beech. Voy.* p. 213.

KWANGTUNG: without locality (*Millett* !). Herb. Kew.

India, Ceylon, Malaya, and Pacific islands.

We have followed the author of the 'Flora of British India' in adopting Mueller's name, because it is difficult to decide which of the others is entitled to priority, and the species has been variously confused with others.

5. **Acalypha indica,** *Linn. Sp. Pl.* ed. 1, p. 1003; *Muell. Arg. in DC. Prodr.* xv. 2, p. 868; *Hook. f. Fl. Brit. Ind.* v. p. 416.

Acalypha chinensis, *Benth. Fl. Hongk.* p. 303, non *Roxb.*

FORMOSA: Takow (*Playfair*!); KWANGTUNG: Macao (*Millett*! *Tate*!); HONGKONG (*Wilford*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

India, Malaya, Pacific islands, and tropical Africa.

1. **Alchornea Davidi,** *Franchet, Pl. David.* p. 264.

KIANGSI: Kiukiang (*Maries*!); HUPEH: Ichang (*A. Henry*, 1187!). Herb. Kew.

2. **Alchornea rufescens,** *Franchet, Pl. David.* p. 265.

HUPEH: Ichang, Patung, Nanto, and other localities (*A. Henry*, 20, 293, 1581, 2090, 2694, 3443, 5336!); SZECHUEN: Wushan (*Faber*, 112!); KWANGTUNG (*Ford*, 160!). Mus. Brit.; Herb. Kew.

3. **Alchornea rugosa,** *Muell. Arg. in Linnæa*, xxxiv. p. 170, et *in DC. Prodr.* xv. 2, p. 905; *Hook. f. Fl. Brit. Ind.* v. p. 422.

Aparisthmium javense, *Hassk. Hort. Bogor.* p. 235.

Alchornea javensis, *Muell. Arg. in Linnæa*, xxxiv. p. 170.

HAINAN (*Swinhoe*! *A. Henry*, 8119 Y, 8536, 8778! *B. C. Henry*, 26!). Mus. Brit.; Herb. Kew.

Burmah, Malay peninsula and archipelago.

4. **Alchornea trewioides,** *Muell. Arg. in Linnæa*, xxxiv. p. 168, et *in DC. Prodr.* xv. 2, p. 901.

Stipellaria trewioides, *Benth. in Hook. Kew Journ. Bot.* vi. p. 3, et *Fl. Hongk.* p. 305.

CHEKIANG: Ningpo (*Faber*, 188!); HONGKONG (*Wright*! *Wilford*! *Champion*!). Mus. Brit.; Herb. Kew.

1. **Cœlodiscus lappaceus,** *Kurz, For. Fl. Brit. Burm.* ii. p. 393; *Hook. f. Fl. Brit. Ind.* v. p. 425.

YUNNAN? (*Anderson*!). Herb. Kew.

Burma.

This is recorded from Yunnan in the 'Flora of British India,' but it is a little doubtful whether it was collected on the Chinese side of the frontier.

1. **Mallotus Apelta,** *Muell. Arg. in Linnæa,* xxxiv. p. 189, et *in DC. Prodr.* xv. 2, p. 963; *Hance in Journ. Linn. Soc.* xiii. p. 122.

Ricinus Apelta, *Lour. Fl. Cochinch.* p. 585.

Croton chinensis, *Geisel. Crot. Monogr.* p. 24.

Rottlera cantoniensis, *Spreng. Syst. Veg.* iii. p. 878.

Rottlera chinensis, *Juss. Tent. Euphorb.* p. 33; *Hook. et Arn. Bot. Beech. Voy.* p. 212; *Benth. Fl. Hongk.* p. 306.

KIANGSI: Kiukiang (*Shearer*!); HUPEH: Nanto, Ichang and neighbourhood (*A. Henry,* 1285, 1971, 2122, 3615, 4211!); SZECHUEN: Wushan (*Faber,* 811!); KWANGTUNG: without locality (*Millett*!), Lofaushan (*Ford*!); HONGKONG (*Hance*! *Wright*! *Harland*!); HAINAN: Hoihow and environs (*A. Henry,* 8057!). Mus. Brit.; Herb. Kew.

2. **Mallotus barbata,** *Muell. Arg. in Linnæa,* xxxiv. p. 184, et *in DC. Prodr.* xv. 2, p. 957; *Hook. f. Fl. Brit. Ind.* v. p. 428; *Hance in Journ. Bot.* 1882, p. 293.

Rottlera barbata, *Wall. Cat.* 7822; *Baill. Étude Gén. Euphorb.* p. 423.

HUPEH: Nanto and mountains to the northward (*A. Henry,* 3917!); SZECHUEN: above Chungking (*Faber,* 810!), chiefly near Tachienlu (*Pratt,* 128!); KWANGTUNG: along the West river (*Sampson,* hb. *Hance,* 1243!); KWANGSI (*Wenyon*!). Mus. Brit.; Herb. Kew.

South India and Malaya.

3. **Mallotus cochinchinensis,** *Lour. Fl. Cochinch.* p. 635; *Hook. f. Fl. Brit. Ind.* v. p. 430.

Mallotus paniculatus, *Muell. Arg. in Linnæa,* xxxiv. p. 189, et *in DC. Prodr.* xv. 2, p. 965.

Rottlera paniculata, *Ad. Juss. Tent. Euphorb.* p. 33; *Benth. Fl. Hongk.* p. 307; *Hook. et Arn. Bot. Beech. Voy.* p. 212.

Mallotus chinensis, *Muell. Arg., errore sub* M. paniculato, *loc. cit., non* Rottlera chinensis, *Ad. Juss.*

FORMOSA (*Oldham,* 477!); KWANGTUNG (*Millett*!); HONGKONG (*Wright*! *Urquhart*! *Hance,* 1491! *Champion*!); HAINAN (*A. Henry,* 8718!). Mus. Brit.; Herb. Kew.

Malaya peninsula and archipelago.

4. **Mallotus Furetianus,** *Muell. Arg. in Linnæa,* xxxiv. p. 190, et *in DC. Prodr.* xv. 2, p. 968.

Hancea muricata, *Benth. Fl. Hongk.* p. 306, *sed non* Claoxylon muricatus, *Wight, Ic. Pl. Ind. Or.* t. 1886.

Rottlera Furetiana, *Baill. Étude Gén. Euphorb.* p. 426.

HONGKONG (*Harland*! *Hance*!). Mus. Brit.; Herb. Kew.

5. **Mallotus Hookerianus,** *Muell. Arg. in Linnæa*, xxxiv. p. 193, et *in DC. Prodr.* xv. 2, p. 975; *Hance in Journ. Bot.* xiii. p. 122.

Hancea Hookeriana, *Seem. in Bot. Voy. 'Herald,'* p. 409, t. 96.

HONGKONG (*Wright*! *Wilford*! *Champion*! *Seemann*!). Mus. Brit.; Herb. Kew.

6. **Mallotus japonicus,** *Muell. Arg. in Linnæa*, xxxiv. p. 189, et *in DC. Prodr.* xv. 2, p. 966; *Maxim. in Engl. Jahrb.* vi. p. 59.

FOKIEN: Amoy (*Fortune*, A 88); FORMOSA: Kelung (*Ford*, 52!), Tamsui (*Oldham*, 479, 480, 481!), Tanglæon (*Wilford*, 482!); HUPEH: Nanto, Patung, and Changlo (*A. Henry*, 4021, 5742, 6260!); SZECHUEN: South Wushan (*A. Henry*, 5742 B!); KWANGTUNG (*Ford*!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Common in Japan.

7. **Mallotus moluccanus,** *Muell. Arg. in Linnæa*, xxxiv. p. 185, et *in DC. Prodr.* xv. 2, p. 958.

Melanolepis multiglandulosa, *Reichenb. et Zoll. in Linnæa*, xxviii. p. 324.

FORMOSA: near the Chinese village of Takow (*Wilford*, 481!), Apes' Hill (*Playfair*, 447!). Herb. Kew.

Widely spread in the Malayan archipelago.

8. **Mallotus philippinensis,** *Muell. Arg. in Linnæa*, xxxiv. p. 196, et *in DC. Prodr.* xv. 2, p. 980; *Hook. f. Fl. Brit. Ind.* v. p. 442; *Hance in Journ. Linn. Soc.* xiii. p. 122.

Rottlera tinctoria, *Roxb. Pl. Coromand.* ii. t. 168, *et Fl. Ind.* iii. p. 827; *Benth. Fl. Hongk.* p. 307.

Rottlera aurantiaca, *Hook. et Arn. Bot. Beech. Voy.* p. 270.

FORMOSA: Tamsui (*Oldham*, 476!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 1587!); SZECHUEN: Min river (*Faber*, 19!); HONGKONG (*Champion*! *Wright*!); HAINAN (*A. Henry*, 8259, 8313!); LUCHU ARCHIPELAGO (*Beechey*! *Wright*!). Mus. Brit.; Herb. Kew.

Throughout tropical Asia, and extending to tropical Australia and Eastern Polynesia.

✓9. **Mallotus Playfairii,** *Hemsl.*, n. sp.

Frutex parvus (*Playfair*), ramulis ultimis crassis compressis dense brevissimeque stellato-tomentosis pallidis. *Folia* opposita, petiolata, subcoriacea, rotundato-ovata vel brevissime cordato-ovata, absque petiolo 2–4 poll. longa, integra vel obscurissime calloso-dentata, abrupte acuminata sed vix acuta, utrinque cristis pilorum brevissimorum dense congestorum parce conspersa, subtus simul brevissime albido-tomentosa, venis primariis lateralibus utrinque circiter 6 secundariis subrectis conjunctis; petiolus teres, usque ad 2 poll. longus. *Flores* ♂ brevissime pedicellati, fasciculatim racemosi, vix sesquilineam diametro, racemis foliis brevioribus, calyx tomentosus, 3–4-partitus, sepalis late ovatis vix acutis; stamina numerosa, antherarum loculis connectivo lato sejunctis.

FORMOSA: Taiwan (*Playfair*, 324!). Herb. Kew.

✓10. **Mallotus populifolius,** *Hemsl.*, n. sp.

Ramuli floriferi ferrugineo-pubescentes, demum glabrescentes. *Folia* alterna, longe petiolata, crasse papyracea, angustissime peltata, ovata, ovato-oblonga, vel panduriformia, absque petiolo 3–6 poll. longa, apice obtusa, rotundata, vel interdum acuminata, basi rotundata vel fere truncata, remote glanduloso-dentata, supra glabra vel cito glabrescentia subtus præcipue secus venas pilosula, simul minutissime glanduloso-punctata, venis primariis lateralibus utrinque sæpius 9, in dentes glandulosos abeuntibus venis secundariis et tertiariis fere rectis conjunctis; petiolus subteres, 1½–3 poll. longus, primum tomentosus denique glaber; stipulæ citissimo deciduæ non visæ. *Flores* ♀ racemoso-paniculati, paniculis axillaribus bis terve ramosis quam folia brevioribus, pedicellis crassiusculis 3-6 lineas longis. *Calyx* ferrugineo-pubescens, sæpius 4-lobus, lobis oblongis rotundatis circiter lineam longis. *Capsula* crustacea, glabra, sexvalvis; semina globosa, vix sesquilineam diametro.

KWANGTUNG: without locality (*Ford*, 161!); HAINAN: Lingmen (*A. Henry*!). Herb. Kew.

11. **Mallotus repandus,** *Muell. Arg. in Linnæa*, xxxiv. p. 197, et *in DC. Prodr.* xv. 2, p. 981, varietates *α* et *β*; *Hook. f. Fl. Brit. Ind.* v. p. 442.

Rottlera cordifolia, *Benth. Fl. Hongk.* p. 307.
Rottlera scabrifolia, *Ad. Juss. Tent. Euphorb.* p. 111, t. 9. f. 29.
Trewia nudiflora, *Hance in Journ. Bot.* 1878, p. 14, non *Willd.*
Mallotus contubernalis, *Hance in Journ. Bot.* 1882, p. 293.

FORMOSA: Tamsui (*Oldham*, 478!), at the foot of the hills on the south-west side (*Wilford*, 492!), Takow (*Playfair*!); HUPEH: various localities near Ichang and elsewhere (*A. Henry*, 678, 1354, 1494, 1765, 3590, 3592, 3858!); SZECHUEN: South Wushan (*A. Henry*, 5542!); KWANGTUNG: near the city of Canton (*Sampson*, hb. *Hance*, 9420!), West river (*Sampson & Hance*, 17694!); HONGKONG (*Wright*! *Ford*!); HAINAN (*A. Henry*, 7991, 8038, 8319! *Hancock*, 18!). Mus. Brit.; Herb. Kew.

Tropical India and Malaya to New Caledonia.

12. **Mallotus ricinoides,** *Muell. Arg. in Linnæa*, xxxiv. p. 187, et *in DC. Prodr.* xv. 2, p. 963; *Hook. f. Fl. Brit. Ind.* v. p. 430.

Croton mollissimus, *Geisel. Crot. Monogr.* p. 73.
Crozophora mollissima, *Spreng. Syst. Veg.* iii. p. 851.
Rottlera Zippelii, *Hassk. Hort. Bogor.* p. 238.

CHINA (*Staunton* in herb. DC., fide *Mueller*).

Tenasserim and the Philippines.

Staunton's specimen of this species in the British Museum is labelled "Sunda Straits."

13. **Mallotus tiliæfolia,** *Muell. Arg. in Linnæa*, xxxiv. p. 190, et *in DC. Prodr.* xv. 2, p. 969.

CHINA (*Staunton* fide *Mueller*).

Malay archipelago and Western Polynesia.

There appears to be no specimen of this species in the British Museum collected by Staunton.

1. **Cleidion ulmifolium,** *Muell. Arg. in Flora*, 1864, p. 481, et *in DC. Prodr.* xv. 2, p. 984.

LUCHU ARCHIPELAGO (*Wright*!). Herb. Kew.

1. **Macaranga Henricorum,** *Hemsl.*, n. sp.

Frutex (ex *B. C. Henry*) ramulis crassis medullosis primum ferrugineo-tomentosis cito glabrescentibus. *Folia* alterna, longe petiolata, subcoriacea, anguste (6–9 lineas) peltata, rotundato-ovata, absque petiolo 5–7 poll. longa, abrupte acuminata, primum saltem subtus ferrugineo- vel albido-tomentosa, demum glabrescentia, subtus creberrime minuteque glandulosa, glandulis immersis; venis primariis lateralibus utrinque circiter 8–10 excurrentibus et apice glandulosis cum secundariis parallelis crebris eximie conjunctis; petiolus fere teres, $1\frac{1}{2}$–$3\frac{1}{2}$ poll.

longus, basi atque apice leviter incrassatus; stipulæ parvæ, acuminatæ, citissimo deciduæ. *Paniculæ* densæ, axillares, quam petioli breviores, bracteis bracteolisque minutis. *Flores* ♂ sessiles, conferti; perianthium ante anthesin globosum, vix semilineam diametro, ferrugineo-tomentosum, per anthesin valvatim 2–3-partitum, lobis fere hemisphæricis; stamina circiter 10. *Flores* ♀ ignoti. *Capsula* tenuis, didyma, primum glanduloso-papillosa, demum nuda, lobis ovoideis circiter 2 lineas longis; semina sphæroidea, testa crustacea.

HAINAN (*A. Henry*, 19! *B. C. Henry*, 10!). Herb. Kew.

Very similar in foliage to *M. indica*, Wight, but wanting the long petioles, large stipules, glaucous hue of the branches, zigzag branching of the inflorescence, and large glandular bracts.

2. **Macaranga Sampsoni,** *Hance in Journ. Bot.* 1871, p. 134.

KWANGTUNG: in a wood near the road above the monastery of Tingushan (*Sampson*!). Mus. Brit.; Herb. Kew.

3. **Macaranga sinensis,** *Muell. Arg. in DC. Prodr.* xv. 2, p. 1001.

Mappa sinensis, *Baill. Étude Gén. Euphorb.* p. 430.

CHINA (*Calléry*, n. 9, in hb. Paris, ex *Mueller*).

4. **Macaranga Tanarius,** *Muell. Arg. in DC. Prodr.* xv. 2, p. 997; *Hook. f. Fl. Brit. Ind.* v. p. 447.

Mappa Tanaria, *Spreng. Syst. Veg.* iii. p. 878; *Benth. Fl. Hongk.* p. 304.
Mappa tomentosa, *Blume, Bijdr.* p. 624.

FORMOSA (*Oldham*, 474!); KWANGTUNG (*Swinhoe*!); HONGKONG (*Wright*! *Hance*, 5197!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Malay peninsula and archipelago.

1. **Ricinus communis,** *Linn. Sp. Pl.* ed. 1, p. 1007; *Muell. Arg. in DC. Prodr.* xv. 2, p. 1017; *Hook. f. Fl. Brit. Ind.* v. p. 457; *Benth. Fl. Hongk.* p. 307; *Bretschn. Early Res.* p. 173.

Ricinus inermis, *Mill.*, *var.* manchuriensis, *Daniell, in Journ. & Trans. Pharm. Soc. Lond.* 2nd series, vol. iii. p. 15.

CHINA: cultivated and more or less naturalized in the southern provinces. Supposed to be a native of Africa.

1. **Homonoia riparia,** *Lour. Fl. Cochinch.* p. 637; *Muell. Arg. in DC. Prodr.* xv. 2, p. 1023; *Hook. f. Fl. Brit. Ind.* v. p. 455.

CHINA: without locality (*Maries*!); HAINAN (*A. Henry*, 8584! *B. C. Henry*, 28!). Herb. Kew.

Tropical India, Ceylon, and Java.

1. **Endospermum chinensis,** *Benth. Fl. Hongk.* p. 304; *Muell. Arg. in DC. Prodr.* xv. 2, p. 1131.

HONGKONG (*Harland*! *Champion*! *Hance*, 1946!). Mus. Brit.; Herb. Kew.

1. **Baliospermum?**

HAINAN (*A. Henry*, 8742!). Herb. Kew.

1. **Gelonium æquoreum,** *Hance in Journ. Bot.* 1866, p. 173.

FORMOSA: Takow (*Wilford*, 538! *Swinhoe*! *Playfair*!). Mus. Brit.; Herb. Kew.

2. **Gelonium æquoreum,** *var.* ? **hainanense,** *Hemsl.*, ab typo differt petiolis longioribus, foliis ovali-oblongis, pedicellis florum femineorum longioribus.

HAINAN (*Swinhoe*! *A. Henry*, 8082, 8222!). Herb. Kew.

Both of these forms are very near the Malayan *G. bifarium*, Roxb.

1. **Tragia involucrata,** *Linn. Sp. Pl.* ed. 1, p. 980; *Muell. Arg. in DC. Prodr.* xv. 2, p. 943; *Hook. f. Fl. Brit. Ind.* v. p. 465.

Tragia cannabina, *Linn. f. Suppl.* p. 415.

CHEKIANG: Chusan (*Dr. Cantor*!). Herb. Kew.

Throughout India and Ceylon.

1. **Homalanthus Leschenaultianus,** *A. Juss. Tent. Euphorb.* p. 50, t. 16. f. 53; *Miq. in Journ. de Bot. Néerl.* i. p. 97.

KWANGTUNG (*Krone* ex *Miquel*).

Common in the Malay archipelago, Polynesia, and extending to North Australia.

We have not seen any Chinese specimens, however, and suspect that Miquel may have mistaken the very similar *Sapium sebiferum*, Roxb., for it.

1. **Erismanthus sinensis,** *Oliver in Hook. Ic. Pl.* t. 1578.

HAINAN (*B. C. Henry*, 23 and 38!). Herb. Kew.

1. **Sapium discolor,** *Muell. Arg. in Linnæa,* xxxii. p. 121; *Hook. f. Fl. Brit. Ind.* v. p. 469.

Excœcaria discolor, *Muell. Arg. in DC. Prodr.* xv. 2, p. 1210.

Stillingia discolor, *Champ. in Hook. Kew Journ. Bot.* vi. p. 1; *Benth. Fl. Hongk.* p. 303.

HONGKONG (*Wright*! *Champion*! *Tate*! *Hance,* 878!). Mus. Brit.; Herb. Kew.

Malacca and Singapore.

2. **Sapium sebiferum,** *Roxb. Fl. Ind.* iii. p. 693; *Hook. f. Fl. Brit. Ind.* v. p. 470.

Excœcaria sebifera, *Muell. Arg. in DC. Prodr.* xv. 2, p. 1210.

Stillingia sebifera, *Michx. Fl. Bor.-Am.* ii. p. 213; *Hook. et Arn. Bot. Beech. Voy.* p. 213; *Benth. Fl. Hongk.* p. 302; *Henriques in Bol. Soc. Brot.* iii. p. 142.

Croton sebiferus, *Linn. Sp. Pl.* ed. 1, p. 1004.

Triadica sinensis, *Lour. Fl. Cochinch.* p. 610; *Bretschn. Early Res.* p. 173.

Stillingia sinensis, *Baill. Étude Gén. Euphorb.* p. 512, t. 7. ff. 26–30.

Stillingfleetia sebifera, *Boj. Hort. Maurit.* p. 284.

KIANGSU: Shanghai (*Maingay*! *Carles*!); CHEKIANG: Ningpo (*Hancock*!); FORMOSA (*Oldham,* 473!); FOKIEN: Amoy (*Fortune,* 10!); HUPEH: Ichang and immediate neighbourhood (*A. Henry,* 1602!); KWANGTUNG (*Millett*!); HONGKONG (*Wright*!, *Urquhart*!); HAINAN (*A. Henry,* 7992!). Mus. Brit.; Herb. Kew.

Also in Japan.

Cultivated and naturalized in other countries, including the south-eastern States of North America.

✓ 3. **Sapium? rotundifolium,** *Hemsl.,* n. sp.

Frutex vel arbor undique glabra, ramulis ultimis crassiusculis, internodiis brevissimis. *Folia* longe graciliterque petiolata, subcoriacea, fere orbicularia, 1½–3½ poll. diametro, integerrima, subtus pallida vel glauca, venis primariis lateralibus utrinque 11–15, sat distinctis costaque subtus elevatis; petiolus teres, 1–2 poll. longus, apice biglandulosus. *Flores* . . . . ? *Capsulæ* sæpius 3 aggregatæ, breviter pedicellatæ, lignosæ, crassæ, 7–8 lineas longæ, valvis demum deciduis, seminibus subtrigonis columno diu persistentibus.

KWANGTUNG: without locality (*Ford,* 169!). Herb. Kew.

Characterized by the almost orbicular leaves.

1. **Sebastiana Chamælea,** *Muell. Arg. in DC. Prodr.* xv. 2, p. 1175; *Hook. f. Fl. Brit. Ind.* v. p. 475.

Microstachys Chamælea, *A. Juss. Tent. Euphorb.* p. 49.
Tragia Chamælea, *Linn. Sp. Pl.* ed. 1, p. 981.

KWANGTUNG: Macao and other localities (*Tate*! *Ford*! *Hance*, 10136!); HAINAN (*Swinhoe*! *A. Henry*!). Mus. Brit.; Herb. Kew.

Widely spread in tropical Asia, Africa, and Australia.

1. **Excœcaria Agallocha**, *Linn. Sp. Pl.* ed. 2, p. 1451; *Muell. Arg. in DC. Prodr.* xv. 2, p. 1220; *Hance in Journ. Linn. Soc.* xiii. p. 123; *Hook. f. Fl. Brit. Ind.* v. p. 472; *Hook. Comp. Bot. Mag.* ii. p. 306, t. 30.

FORMOSA: Takow (*Playfair*!); HONGKONG (*Sampson* ex *Hance*). Mus. Brit.; Herb. Kew.

Common on tropical shores in Asia, Australia, and Western Polynesia.

2. **Excœcaria japonica**, *Muell. Arg. in Linnæa*, xxxii. p. 123, et *in DC. Prodr.* xv. 2, p. 1217; *Hance in Journ. Linn. Soc.* xiii. p. 123.

Stillingia japonica, *Sieb. et Zucc. Fl. Jap., Fam. Nat.* i. p. 37; *Benth. Fl. Hongk.* p. 303.

HUPEH: Ichang, Patung, Nanto, and other localities (*A. Henry*, 473, 558, 1128, 1615, 1970, 3602, 3769, 3927!); HONGKONG (*Champion*! *Wright*!); COREA: Port Chusan (*Wilford*, 916!); COREAN ARCHIPELAGO (*Oldham*, 729!). Mus. Brit.; Herb. Kew.

Japan.

124. URTICACEÆ: ULMEÆ.

1. **Ulmus campestris**, *Linn.* pro parte; *Planch. in DC. Prodr.* xvii. p. 156; *Maxim. in Mél. Biol.* ix. p. 22; *Franchet, Pl. David.* p. 268.

CHIHLI: around Peking (*Skatschkoff* ex *Maximowicz*); SHINGKING: various localities (*Ross*! *Webster*!); HUPEH, SHENSI, and KANSUH (*Piasezki* ex *Maximowicz*). Herb. Kew.

Europe and North Africa through Asia Minor and Siberia to Mandshuria.

Several varieties are recorded from China, including *U. pumila*, Linn.; but we cannot attempt to discriminate them here.

✓ 2. **Ulmus (§ Dryoptelea) castaneifolia**, *Hemsl.*, n. sp. (Plate X.)
Arbor 50-pedalis (fide *Henry*), ramulis floriferis crassiusculis

J. Fitch del. et lith. J. N. Fitch imp.

ULMUS CASTANEIFOLIA, *Hemsl.*

mox glabrescentibus, cortice leviter corrugato rubescenti. *Folia* decidua, primum subtus puberula et simul in costularum axillis conspicue barbata, demum glabrescentia, subcoriacea, breviter petiolata, lanceolata, cum petiolo usque ad 5½ poll. longa et 1¾ lata, inæqualiter duplicato-crenato-dentata, dentibus crassis, acuminata, basi leviter obliqua, supra demum rugulosa, costa venisque immersis, subtus costa venisque elevatis, venis primariis lateralibus numerosis rectis in dentes majores abeuntibus, venis ultimis eximie reticulatis; petiolus teres, primum puberulus, circiter semipollicaris; stipulæ membranaceæ, brunneæ, angustæ, vix semipollicares, cito deciduæ. *Flores* juveniles non visi, dense fasciculati, pedicellis crassis puberulis, circiter 2 lineas longis; perianthium persistens, subcampanulatum, inæqualiter obtuse 4-lobulatum, lobis ciliatis. *Samaræ* breviter stipitatæ, tenues, omnino glabræ, ovali-oblongæ, cum stipite circiter 9–10 lineas longæ et 5 latæ, loculo seminifero juxta sinum stigmatosum posito, ramis stigmatosis elongatis recurvis hirsutis.

HUPEH: Changyang (*A. Henry*, 7780!); SZECHUEN: South Wushan (*A. Henry*, 5498!). Herb. Kew.

3. **Ulmus Davidiana**, *Planch. in Comptes-rendus de l'Acad. de Paris*, 1872, i. p. 1498, nomen nudum, et *in DC. Prodr.* xvii. p. 158; *Maxim. in Mél. Biol.* ix. p. 24; *Franchet, Pl. David.* p. 266.

CHIHLI: Jehol (*David* ex *Franchet*).

We have seen no authenticated specimen of this species; but we cannot find any character in the description to distinguish it from *U. macrocarpa*, Hance. A hairy fruit is said to be characteristic of both.

4. **Ulmus lancifolia**, *Roxb. Fl. Ind.* ii. p. 66; *Wall. Pl. As. Rar.* ii. p. 86, t. 200; *Hook. f. Fl. Brit. Ind.* v. p. 480.

HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3271!). Herb. Kew.

Northern and Eastern India and Burma.

There is a little doubt concerning the barren Chinese specimen belonging to this species; but if not the same it must be closely allied, and almost or quite evergreen in character.

5. **Ulmus macrocarpa**, *Hance in Journ. Bot.* 1868, p. 332; *Planch. in DC. Prodr.* xvii. p. 160; *Maxim. in Mél. Biol.* ix. p. 22; *Franchet, Pl. David.* p. 268.

CHIHLI: Jehol (*David*, hb. *Hance*, 14538!), West hills, Peking (*Carles*, 187!); SHINGKING: west of Hingjing (*Ross*, 313!), without locality (*Ross*, comm. 1890!). Mus. Brit.; Herb. Kew.

U. Davidiana, Planch., is probably the same as this.

6. **Ulmus montana**, *With. Bot. Arr. Veg. Gr. Brit.* ed. 3, ii. p. 279; *Planch. in DC. Prodr.* xvii. p. 159; *Maxim. in Mél. Biol.* ix. p. 25; *Franch. et Savat. Enum. Pl. Jap.* i. p. 431.

SZECHUEN: South Wushan (*A. Henry*, 5690!). Herb. Kew.

Europe, except the colder regions, North Africa, Asia Minor, and Japan.

Boissier (Flora Orientalis, iv. p. 1158) includes Siberia in the geographical area of this species, whereas Maximowicz (Mélanges Biologiques, ix. p. 25) says "*in tota Sibiria* U. montana *hucusque desideratur*."

7. **Ulmus parvifolia**, *Jacquin, Hort. Schœnbr.* iii. t. 262; *Planch. in DC. Prodr.* xvii. p. 161; *Maxim. in Mél. Biol.* ix. p. 25; *Franch. et Savat. Enum. Pl. Jap.* i. p. 431; *Franchet in Mém. Soc. Sc. Nat. Cherb.* xxiv. p. 253.

Ulmus chinensis, *Pers. Syn. Pl.* i. p. 291.
Ulmus virgata, *Roxb. Fl. Ind.* ii. p. 67.
Ulmus chinensis, *Loud. Arb. Brit.* iii. p. 1377.
Planera parvifolia, *Sweet, Hort. Brit.* ed. 2, p. 464.
Microptelea parvifolia, *Spach in Ann. Sc. Nat.* 2me série, xv. p. 358.

CHINA: without locality (*Home*!); KIANGSU: Shanghai (*Maingay*! *Carles*! *Faber*!); FOKIEN: Amoy (*Hance*! *Swinhoe*!); HUPEH: Nanto, Chienshih, and other localities (*A. Henry*, 1030, 2602, 3079, 3219, 7518, 7681!). Mus. Brit.; Herb. Kew.

Japan and Tonking.

Dr. Henry's 1030 includes barren branches with leaves an inch and a half broad.

The Western Tibet specimens referred to this species (Fl. Brit. Ind. v. p. 481) are all barren branches, and, as Sir Joseph Hooker suggests, probably belong to some other species.

8. **Ulmus**, sp. n.?; ramulis foliisque dense molliterque tomentosis, foliis brevissime petiolatis lanceolatis minute serrulatis maximis tripollicaribus, venis primariis lateralibus utrinque plus quam 20 fere rectis. Flores atque samaræ desunt.

SZECHUEN: South Wushan (*A. Henry*, 5537!). Herb. Kew.

This is very different in foliage from any other Chinese elm that we have seen.

URTICACEÆ: CELTIDEÆ.

1. **Zelkova acuminata,** *Planch. in DC. Prodr.* xvii. p. 166.

Ulmus Keaki, *Sieb. in Verh. Batav. Gen.* v. xii. p. 28.

Zelkova Keaki, *Maxim. in Mél. Biol.* ix. p. 21; *Franch. et Savat. Enum. Pl. Jap.* i. p. 430.

Planera acuminata, *Lindl. in Gard. Chron.* 1862, p. 428.

Planera japonica, *Miq. in Ann. Mus. Lugd.-Bat.* iii. p. 66; *Hemsl. in Journ. Bot.* 1876, p. 209.

Corchorus hirtus *et* C. serratus, *Thunb. in Trans. Linn. Soc.* ii. p. 335.

KIANGSU: Shanghai (*Faber*!); CHEKIANG: Tahoo Lake (*Carles*!); COREA: Soul (*Carles*!). Herb. Kew.

Japan.

2. **Zelkova Davidii,** *Benth. et Hook. f. Gen. Pl.* iii. p. 353.

Hemiptelea Davidii, *Planch. in Compt. Rend. de l'Acad. des Sc. de Paris,* 1872, i. p. 1496, et *in DC. Prodr.* xvii. p. 165; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 386; *Franchet, Pl. David.* p. 268, et *Nouv. Arch.* 2me série vii. p. 76, t. 9; *Maxim. in Mél. Biol.* ix. p. 22.

Planera Davidii, *Hance in Journ. Bot.* 1868, p. 333.

Planera vel genus novum, *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477.

CHIHLI: vicinity of Peking, Jehol, and other localities (*David*! *Bretschneider*! *Skatschkoff*!); SHINGKING: Hingjing and Fooling (*Ross*!); CHEKIANG (*Faber*!); KIANGSI: Kiukiang (*Shearer*! *Faber*!); COREA (*Carles*!). Mus. Brit.; Herb. Kew.

1. **Celtis Bungeana,** *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 71; *Planch. in DC. Prodr.* xvii. p. 171; *Franchet, Pl. David.* p. 269, et *in Mém. Soc. Sc. Nat. Cherb.* xxiv. p. 253.

Celtis Davidiana, *Carr. in Rev. Hort.* 1868, p. 300.

Celtis sinensis, *Planch. in Ann. Sc. Nat.* 3me série, x. p. 286.

Celtis chinensis, *Bunge, Enum. Pl. Chin. Bor.* p. 61, *non* C. sinensis, *Pers. ex Planch. loc. cit.*

CHIHLI: near Peking (*Bunge*! *Carles*! *Bushell*!); SHINGKING: Chienshan (*Ross*!); CHEKIANG: Tientai mountain (*Faber*, 104!); HUPEH (*A. Henry*, 6483!); SZECHUEN: South Wushan (*A. Henry*, 5735!). Mus. Brit.; Herb. Kew.

This species has been confused with *C. sinensis*, Pers. (*C. japonica*, Planch.), from which it is easily distinguished in a dried state by its thinner, green leaves and longer, slenderer pedicels.

Possibly Dr. Henry's specimens from Hupeh and Szechuen may prove to be specifically different.

[*Celtis caudata*, Hance, is *Prunus pogonostyla*, Maxim.]

2. **Celtis Davidiana**, *Carr. in Rev. Hort.* 1868, p. 300.

NORTH CHINA (*David* ex *Carrière*).

We have seen no authenticated specimen of this species.

3. **Celtis nervosa**, *Hemsl.*, n. sp.

Frutex (*Playfair*) dense ramosus, glaber vel mox glabrescens, ramulis gracilibus, internodiis petiolos vix excedentibus. *Folia* petiolata, subcoriacea, irregulariter rotundato-ovata, maxima 15 lineas longa, sæpius supra medium pauci-(3–7)apiculato-denticulata, basi rotundata vel subcordata, venis rigidis subtus elevatis cum vena marginali insigniter reticulatis; petiolus primum puberulus, $1\frac{1}{2}$–2 lineas longus. *Flores* axillares, solitarii, pedicellis petiolos paulo superantibus; perianthium sæpius 4-partitum, segmentis ovali-oblongis intus puberulis. *Bacca* glauca, ovoidea, circiter 3 lineas longa.

FORMOSA: Apes' Hill (*Playfair*, 458 !). Herb. Kew.

Characterized by small, rigid, prominently veined leaves.

4. **Celtis philippinensis**, *Blanco, Fl. Filip.* ed. 1, p. 197; *Planch. in DC. Prodr.* xvii. p. 184; *Benth. Fl. Hongk.* p. 324; *Maxim. in Mél. Biol.* ix. p. 28.

KWANGTUNG: Macao (*Callery* !); HONGKONG (*Wilford* ! *Hance* !); HAINAN (*A. Henry*, 8263 !). Mus. Brit.; Herb. Kew.

Malay Archipelago and North Australia.

5. **Celtis sinensis**, *Pers. Syn. Pl.* i. p. 292; *Benth. Fl. Hongk.* p. 324; *Planch. in DC. Prodr.* xvii. p. 172; *Baker et S. Moore in Journ. Linn. Soc.* xvii. p. 386; *Franchet, Pl. David.* p. 268; *Maxim. in Mél. Biol.* ix. p. 27; *Franch. et Savat. Enum. Pl. Jap.* i. p. 431.

Celtis japonica, *Planch. in DC. Prodr.* xvii. p. 172.

Celtis Willdenowiana, *Roem. et Schult. Syst. Veg.* vi. p. 306.

Celtis orientalis, *Thunb. Fl. Jap.* p. 114.

KIANGSU: Shanghai (*Maingay* ! *Carles* ! *Faber* !); KIANGSI: Kiukiang (*Faber*, 922 !); FORMOSA: Tamsui (*Oldham*, 512, 513 !): HUPEH: Ichang, Patung, and various other localities (*A. Henry*,

2262, 2997, 3404, 3851, 4214, 4528, 5276, 7866, 7872!); Kwangtung: Macao (*Callery*!), Lofaushan and other localities (*Ford*, 32–1883, 179–1888!); Hongkong (*Harland*! *Wilford*! *Wright*!); Hainan (*A. Henry*, 8573!); Corea: Port Hamilton (*Wilford*, 705!); Corean Archipelago (*Oldham*, 722!). Mus. Brit.; Herb. Kew.

Japan.

Exceedingly common, except in the extreme north of China.

1. **Pteroceltis Tatarinowii**, *Maxim. in Mél. Biol.* ix. p. 26, cum fig. xylogr., et *Fl. As. Or. Fragm.* p. 53; *Benth. et Hook. Gen. Pl.* iii. p. 354.

Ulmi species nova altera, *Maxim. Ind. Pek. in Prim. Fl. Amur.* p. 477.

Shensi and Kansuh (*Piasezki* ex *Maximowicz*).

1. **Trema amboinensis**, *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 61; *Hook. f. Fl. Brit. Ind.* v. p. 484.

Sponia amboinensis, *Decne. in Nouv. Ann. Mus. Par.* iii. p. 498; *Planch. in DC. Prodr.* xvii. p. 198.

Celtis amboinensis, *Willd. Sp. Pl.* iv. p. 997; *Brongn. in Voy. de la Coquille, Bot.* t. 47.

Sponia velutina, *Planch. in Ann. Sc. Nat.* 3me série, x. p. 327; *Miq. Fl. Ind. Bat.* i. 2, p. 216; *Benth. Fl. Hongk.* p. 324.

Sponia argentea, *Seem. Bot. Voy. 'Herald,'* p. 413, et *Benth. in Hook. Kew Journ. Bot.* vi. p. 75, non *Planch.*

China: without locality (*Millett*! *Fortune*, 54!); Fokien: Amoy (*Swinhoe*!); Formosa (*Oldham*, 514!); Kwangtung: Macao (*Meyen*! *Callery*!); Hongkong (*Hance*! *Hinds*! *Champion*! *Wright*! *Wilford*!); Kwangsi (*Wenyon*!); Hainan (*A. Henry*, 8490!). Mus. Brit.; Herb. Kew.

India, Malaya, and North Australia.

2. **Trema orientalis**, *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 62; *Hook. f. Fl. Brit. Ind.* v. p. 484.

Sponia orientalis, *Planch. in Ann. Sc. Nat.* 3me série, x. p. 323, et *in DC. Prodr.* xvii. p. 200; *Maxim. in Mél. Biol.* ix. p. 29, et *in Engl. Jahrb.* vi. p. 56.

Sponia argentea, *Planch. loc. cit.* ex *Maxim. loc. cit.*

China: without locality (*Millett*!); Formosa: Tamsui (*Oldham*, 514/1!). Herb. Kew.

India and Malaya.

3. **Trema timorensis**, *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 60; *Hook. f. Fl. Brit. Ind.* v. p. 483; *Planch. in DC. Prodr.* xvii. p. 196.

Trema virgata, *Blume, loc. cit.*

Sponia virgata, *Planch. in Ann. Sc. Nat.* 3me série, x. p. 316, et *in DC. Prodr.* xvii. p. 195.

Sponia Sampsoni, *Hance in Ann. Sc. Nat.* 5me série, v. p. 242.

HUPEH: Ichang, Patung, and Changyang (*A. Henry*, 573, 6210, 7170!); KWANGTUNG (*Sampson*, hb. *Hance*, 11374! *Ford*!); HAINAN (*A. Henry*, 8559!). Mus. Brit.; Herb. Kew.

India, Malaya, and North Australia.

There are two very different-looking forms referred to this species—one nearly glabrous, the other having thicker, rougher, pubescent leaves, drying a darker colour. Possibly they represent distinct species.

1. **Aphananthe aspera**, *Planch. in DC. Prodr.* xvii. p. 208; *Franch. et Savat. Enum. Pl. Jap.* i. p. 432.

Homoioceltis aspera, *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 64; *Maxim. in Mél. Biol.* ix. p. 28.

Celtis Muku, *Sieb. et Zucc. in Abhandl. Muench. Akad.* iv. 3, p. 223.

Sponia nudiflora, *Sieb. et Zucc. loc. cit.*

Prunus aspera, *Thunb. Fl. Jap.* p. 201.

CHEKIANG: Tientai mountain (*Faber*, 199!). Herb. Kew.

Apparently common in Japan, but we have seen only the one specimen cited above from China.

1. **Gironniera nitida**, *Benth. Fl. Hongk.* p. 325; *Planch. in DC. Prodr.* xvii. p. 207; *Maxim. in Mél. Biol.* ix. p. 29.

HONGKONG (*Champion*!). Herb. Kew.

2. **Gironniera subæqualis**, *Planch. in Ann. Sc. Nat.* 3me série, x. p. 339, et *in DC. Prodr.* xvii. p. 206; *Hook. f. Fl. Brit. Ind.* v. p. 485.

Gironniera chinensis, *Benth. Fl. Hongk.* p. 325.

KWANGTUNG (*Ford*! *Faber*!); HONGKONG (*Wright*! *Wilford*! *Harland*! *Champion*!); HAINAN: (*A. Henry*, 8722!). Mus. Brit.; Herb. Kew.

Malay peninsula and archipelago.

URTICACEÆ: CANNABINEÆ.

1. **Humulus japonicus,** *Sieb. et Zucc. Fl. Jap., Fam. Nat.* ii. p. 89; *DC. Prodr.* xvi. 1, p. 29; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477; *Franch. et Savat. Enum. Pl. Jap.* i. p. 429; *Franchet, Pl. David.* p. 269, et *in Mém. Soc. Sc. Nat. Cherbourg,* xxiv. p. 252; *Seem. Bot. Voy. 'Herald,'* p. 512, t. 98.

Humulus aculeatus, *Nutt. in Journ. Acad. Sc. Philad.* ser. 2, i. p 182.

CHINA: without locality (*Home*!); CHIHLI: near Peking (*Bretschneider*! *Swinhoe*!); SHINGKING: near Moukden (*James*! *Webster*!); SHANTUNG: Chefoo (*Forbes*!); KIANGSU: Shanghai (*Faber*! *Maingay*! *Carles*!); CHEKIANG: Ningpo mountains (*Faber*!); FORMOSA (*Oldham,* 515!); HUPEH: Ichang and immediate neighbourhood (*A. Henry,* 2224!); KWANGTUNG (*Seemann*! *Hance,* 562! *Ford,* 313!); COREAN ARCHIPELAGO (*Oldham,* 763!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan and Mandshuria.

2. **Humulus Lupulus,** *Linn. Sp. Pl.* ed. 1, p. 1028; *DC. Prodr.* xvi. 1, p. 29; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 489; *Hance in Journ. Bot.* 1882, p. 293 (var. cordifolius).

Humulus cordifolius, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 133.

CHEKIANG: Meichi (*Poli* ex *Franchet* in litt.); KWANGTUNG: Lienchau river (*B. C. Henry,* hb. *Hance*!). Mus. Brit.

Europe, Asia Minor, Siberia, Japan, and Eastern North America.

1. **Cannabis sativa,** *Linn. Sp. Pl.* ed. 1, p. 1027; *DC. Prodr.* xvi. 1 p. 31 (δ. chinensis); *Franchet, Pl. David.* p. 269; *Debeaux, Fl. Tchef.* p. 128, *Fl. Shanghai,* p. 54; *Bretschn. Early Res.* pp. 13 et 173; *Hook. f. Fl. Brit. Ind.* v. p. 487; *A. Henry in China Imp. Marit. Customs,* 2nd special series, no. 16 (1891), pp. 5 et 7.

Cannabis chinensis, *Del. in Ind. Sem. Hort. Monsp.* 1849.

CHINA: frequent in the north and other parts of the Empire (ex *Bretschneider*); CHIHLI: near Peking (*Bushell*!); SHINGKING: Kaichow to Kiuchow (*Ross*!); SHANTUNG: Chefoo cult. (*Carrall*!); HUPEH: Ichang and Nanto (*A. Henry,* 2024, 2431!). Mus. Brit.; Herb. Kew.

Indigenous in North India and Central Asia, and widely naturalized.

"*Ta Ma* of books; *Hsiao Ma,* colloquially in North China, because there the Castor Oil is spoken of as *Ta Ma* (large *Ma*), from its stature; *Huo Ma* colloquially in South China. It is called *Ch'ing Ma* by the Chinese at Tientsin." (*A. Henry, loc. sup. cit.*)

URTICACEÆ: MOREÆ.

1. **Fatoua pilosa**, *Gaudich. in Freyc. Voy. Bot.* p. 509; *Bureau in DC. Prodr.* xvii. p. 256 cum synonymis et varietatibus; *Franch. et Savat. Enum. Pl. Jap.* i. p. 434.

Fatoua pilosa, F. lanceolata, *et* F. subcordata, *Gaudich. Bot. Voy. de la 'Bonite,'* t. 84.

Fatoua japonica, *Blume, Mus. Bot. Lugd.-Bat.* ii. 1, p. 38; *Hance in Journ. Bot.* 1878, p. 232.

KIANGSU: Shanghai (*Carles*!); FORMOSA; east coast (*Wilford*, 464! *Swinhoe*! *Playfair*!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 2779, 2950!); KWANGTUNG: various localities (*Millett*! *Ford*! *Krone*! *Sampson*! *Hance*!); HAINAN (*A. Henry*, 8752!). Mus. Brit.; Herb. Kew.

Malay archipelago and Japan.

1. **Taxotrophis**, sp.?; floribus ♂ capitatis capitulis subsessilibus involucratis.

HAINAN (*A. Henry*, 8703!). Herb. Kew.

1. **Streblus asper**, *Lour. Fl. Cochinch.* p. 615; *Bureau in DC. Prodr.* xvii. p. 218; *Hance in Journ. Bot.* 1878, p. 232; *Hook. f. Fl. Brit. Ind.* v. p. 489.

Epicarpurus orientalis, *Blume, Bijdr.* p. 488; *Wight, Ic. Pl. Ind. Or.* t. 1961.

HAINAN (*Swinhoe*! *Hancock*! *A. Henry*, 7957, 8565!). Mus. Brit.; Herb. Kew.

Widely spread in tropical Asia.

1. **Malaisia tortuosa**, *Blanco, Fl. Filip.* p. 789; *Bureau in DC. Prodr.* xvii. p. 221; *Benth. Fl. Austral.* vi. p. 180.

Malaisia scandens, M. viridescens, *et* M. acuminata, *Planch. in Ann. Sc. Nat.* 4me série, iii. p. 293.

Trophis scandens, *Hook. et Arn. Bot. Beech. Voy.* p. 214.

Dumartroya fagifolia, *Gaudich. in Bot. Voy. de la 'Bonite,'* t. 97.

FORMOSA (*Oldham*, 531½! *Playfair*, 450!); KWANGTUNG:

Macao and other localities (*Millett*! *Callery*! *Hance*, 10134!); HAINAN (*A. Henry*, 8006, 8169, 8450!). Mus. Brit.; Herb. Kew.

Malaya and Australia.

1. **Broussonetia Kæmpferi**, *Sieb. in Verh. Bat. Gen.* xii. p. 28; *Bureau in DC. Prodr.* xvii. p. 226; *Kurz in Journ. Bot.* 1873, p. 193; *Franch. et Savat. Enum. Pl. Jap.* i. p. 433.

Broussonetia monoica, *Hance in Journ. Bot.* 1882, p. 294.

HUPEH: Ichang, Changyang, Chienshih, and Changlo (*A. Henry*, 3668, 3668 A, 5226, 5972, 6257!); KWANGTUNG: Lienchau river (*B. C. Henry*, hb. *Hance*!). Mus. Brit.; Herb. Kew.

Japan.

2. **Broussonetia papyrifera**, *Vent. Tabl. du Règne Vég.* iii. p. 547; *Bureau in DC. Prodr.* xvii. p. 224; *Maxim. Ind. Fl. Pek. in Prin. Fl. Amer.* p. 477; *Franch. et Savat. Enum. Pl. Jap.* i. p. 433; *Franchet, Pl. David.* p. 269; *Debeaux, Fl. Tients.* p. 40, et *Fl. Shangh.* p. 55; *Hook. f. Fl. Brit. Ind.* v. p. 490; *Bot. Mag.* t. 2358; *Bretschn. Early Res.* pp. 35, 126, et 173.

Streblus cordatus, *Lour. Fl. Cochinch.* p. 615.

CHIHLI: near Peking (*Bunge*!); KIANGSU: Shanghai (*Carles*! *Perry*!); CHEKIANG: Tientai mountains (*Faber*!); FORMOSA: Takow and other localities (*Playfair*! *Oldham*, 528, 529!): HUPEH: Ichang, Patung, Chang, and other localities (*A. Henry*, 1426, 3666, 3740!); HAINAN (*A. Henry*, 8174, 8714!); COREA: Port Hamilton (*Wilford*, 692; *Oldham*, 744). Mus. Brit.; Herb. Kew.

Burma, Malaya, and Polynesia.

The Paper Mulberry is extensively cultivated, and it is very variable in foliage.

1. **Morus alba**, *Linn. Sp. Pl.* ed. 1, p. 986; *Bureau in DC. Prodr.* xvii. p. 238 (varietates plures); *Franchet, Pl. David.* p. 270; *Hook. f. Fl. Brit. Ind.* v. p. 492; *Bretschn. Early Res.* pp. 109, 173 et 174.

Morus constantinopolitana, *Poir. in Lam. Encyc.* iv. p. 381; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477.

Morus indica, *Linn. Sp. Pl.* ed. 1, p. 986; *Hook. f. Fl. Brit. Ind.* v. p. 492.

CHIHLI: near Peking (*Bunge*! *Bushell*! *Bretschneider*!):

Shingking: Moukden and other localities (*Webster! Ross!*); Kiangsi: Kiukiang (*Maries!*); Formosa (*Swinhoe! Wilford! Playfair! Oldham!*); Hupeh and Szechuen: numerous localities (*A. Henry*, 1335, 1339, 1392, 1586, 3498, 3756, 3843, 4755, 5564, 5668, 5669, 5741, 5749, 5926, 6094, 6248, 6249!); Hainan (*A. Henry*, 8283!); Corea: Chemulpo (*Carles!*); Luchu Archipelago (*Wright!*). Mus. Brit.; Herb. Kew.

Temperate and subtropical Asia, and extensively cultivated.

We have not attempted to discriminate between *Morus alba* and *M. indica*.

[Franchet (Mém. Soc. Sc. Nat. Cherbourg, xxiv. p. 253) mentions that *Morus nigra*, Linn., is cultivated at Chefoo.]

✓ 2. **Morus cathayana**, *Hemsl.*, n. sp.

Arbor 10–20-pedalis (*A. Henry*), ramulis ultimis floriferis crassiusculis, cortice pallida lenticellata cito glabrescenti. *Folia* petiolata, papyracea, cordiformia, cum petiolo usque ad 7 poll. longa, abrupte acuteque acuminata, calloso-crenata, supra scabrida, subtus molliter parce pubescentia, venis primariis lateralibus utrinque circiter 6 duabus inferioribus venulis conspicuis circiter 6 cum marginibus connexis; petiolus pubescens, teres, graciliusculus, sæpius circiter pollicaris. *Florum* ♂ spicæ tenues, pauciflora, graciliter pedunculatæ, cum pedunculo circiter sesquipollicares; perianthii hirsuti segmenta lata, obtusa. *Florum* ♀ spicæ cylindricæ, breviter pedunculatæ, absque pedunculo 9–15 lineas longæ; perianthii glabri segmenta fere orbicularia. *Fructus* maturus non visus.

Hupeh: Chienshih, South Patung, and Nanto (*A. Henry*, 5543, 5860, 6378!). Herb. Kew.

Near the Indian *Morus lævigata*, Wall., but having relatively short flower-spikes borne on much shorter peduncles.

There are specimens in the Kew Herbarium of what may be a third species of *Morus* (*Fortune*, 35, and *A. Henry*, 1409, 5453, 5487); but there are only male flowers.

[*Dorstenia chinensis*, Lour. (Fl. Cochinch. p. 90), is the *Procris chinensis*, Spreng. (Syst. Veg. iii. p. 846), which Weddell (DC. Prodr. xvi. p. 194) says is *alius ordinis*; and Bretschneider (Early Res. p. 174) was unable to identify it by its Chinese name *pechi*. Loureiro, *loc. cit.*, states that it was frequently employed medicinally. Possibly an *Elatostemma*.]

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NOTICE.

VOLS. XXVI. & XXX. are in course of simultaneous issue to expedite the publication of papers, and the Parts already published are as follows:—

Vol. XXVI., Nos. 173–6, and 177 (the present Part).

(Nos. 178–180 are reserved for the continuation of Messrs. Forbes and Hemsley's 'Index Floræ Sinensis.')

Vol. XXVII., Nos. 181–188. (Complete.)

Vol. XXVIII., Nos. 189–196. (Complete.)

Vol. XXIX., Nos. 197–204. (Complete.)

Vol. XXX., Nos. 205, 206, and 207.

Attention to this announcement is specially requested, to prevent application to the Librarian for unpublished Parts.

The last Meeting of the present Session will be held on THURSDAY, June 21st, when the Chair will be taken at 8 P.M.

DECEMBER 1. Price 3s.

THE JOURNAL

OF

THE LINNEAN SOCIETY.

VOL. XXVI. **BOTANY.** No. 178.

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This consists of nine Fellows (three of whom retire annually) and of the four officers *ex officio*, in all thirteen members. The former are elected annually by the Council in June, and serve till the succeeding Anniversary. The Committee meet at 4 P.M., at intervals during the Session. The Members for 1898–99, in addition to the officers, are:—

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NOTE.—The Charter and Bye-Laws of the Society, as amended to the 19th March, 1891, may be had on application.

URTICACEÆ: ARTOCARPEÆ.

1. **Ficus Abelii**, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 281 *Maxim. in Mél. Biol.* xi. p. 336.

Ficus pyriformis, *Miq. in Hook. Lond. Journ. Bot.* vii. p. 437, t. 6 fig. A, nec *Hook. et Arn.*

Ficus pyriformis, var. Abelii, *King in Ann. Bot. Gard. Calc.* i. p. 158, t. 200 A.

CHINA: without locality (*Abel*!). Herb. Kew.

In this, and in some other instances, we have not followed Sir George King in reducing the Chinese forms to Indian species, because it is more convenient for local purposes.

2. **Ficus altissima**, *Blume, Bijdr.* p. 444; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 285; *King in Ann. Bot. Gard. Calc.* i. p. 30, tt. 30, 31, et t. 82 S; *Hook. f. Fl. Brit. Ind.* v. p. 504.

Ficus laccifera, *Roxb. Fl. Ind.* iii. p. 545; *King, loc. cit.* t. 30 A; *Maxim. in Mél. Biol.* xi. p. 334; *Wight, Ic. Pl. Ind. Or.* t. 656.

KWANGTUNG: near temples (*Hance*!); HAINAN (*A. Henry*, 8190!). Mus. Brit.; Herb. Kew.

Widely spread in India from the foot of the Himalayas to Ceylon, Burma, Malay Peninsula and Archipelago.

3. **Ficus Beecheyana**, *Hook. et Arn. Bot. Beech. Voy.* p. 271; *Miq. in Hook. Lond. Journ. Bot.* vii. p. 437; *Benth. Fl. Hongk.* p. 329; *Maxim. in Mél. Biol.* xi. p. 329.

Ficus erecta, *Thunb.*, var. Beecheyana, *King in Ann. Bot. Gard. Calc.* i. p. 142, t. 178 A.

FORMOSA: apparently common from Tamsui to South Cape (*Oldham*, 533, 534, 539, 540! *Ford*, 37! *Playfair*, 361! *Wilford*, 562! *A. Henry*, 130, 158, 245, 314 A, B, C, 964, 1794, 1794 A, 2011!); HONGKONG (*Wright*! *Harland*!); LUCHU ARCHIPELAGO (*Beechey*!). Mus. Brit.; Herb. Kew.

While admitting the close affinity of this fig with *Ficus erecta*, Thunb., we do not follow King in reducing it, because it is so easily distinguished that it seems more convenient to keep them apart.

4. **Ficus Benjamina**, *Linn. Mant.* p. 129 (excl. syn. *Itti Alu, Rheede, Hort. Malab.* i. t. 26, fide *King in Ann. Bot. Gard. Calc.* i. p. 43, t. 52); *Hook. Fl. Brit. Ind.* v. p. 508.

Urostigma Benjamina, etc., *Miq. in Hook. Lond. Journ. Bot.* vi. p. 583.

Ficus comosa, *Roxb. Corom. Pl.* t. 125; *Wight, Ic. Pl. Ind. Or.* t. 658.

Ficus neglecta, *Decne. in Nouv. Ann. du Mus. d'Hist. Nat.* iii. p. 494; *Maxim. in Mél. Biol.* xi. p. 336.

Ficus hæmatocarpa, *Decne. loc. cit.*

HAINAN: Hoitow on the west coast (*F. Fagg*, hb. *Hance*, 12781!), without locality (*A. Henry*, 7994!). Mus. Brit.; Herb. Kew.

Deccan Peninsula, Andaman Islands, Eastern Himalaya, Assam, Burma, and Sumatra, eastward to Celebes and Timor.

[*Ficus biglandulosa*, Wall. Cat. n. 4480 = *F. diadena*, Steud. (Nomencl. ed. 2, i. p. 636), recorded as Chinese, we have not identified.]

5. **Ficus Carica**, *Linn. Sp. Pl.* ed. 1, p. 1059; *Lour. Fl. Cochinch.* p. 664; *Maxim. in Mél. Biol.* xi. p. 330; *Franch. et Savat. Enum. Pl. Jap.* i. p. 436; *Boiss. Fl. Or.* iv. p. 1154; *Bretschn. Early Res.* p. 174.

Ficus hirta et F. Carica, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* nn. 780, 781.

Cultivated throughout China (ex *Bretschneider*).

Boissier, *loc. sup. cit.*, gives the geographical area of the common fig as South Europe, North Africa, Asia Minor, and Persia eastward to North India.

Dr. G. King (Ann. Bot. Gard. Calcutta, i. p. 147) expresses the opinion that *F. caricoides*, Roxb., *F. virgata*, Roxb., *F. pseudosycomorus*, Decne., and *F. palmata*, Forsk., may be forms of *F. Carica*, Linn.

6. **Ficus chlorocarpa**, *Benth. Fl. Hongk.* p. 330; *Maxim. in Mél. Biol.* xi. p. 330.

Ficus variegata, var. chlorocarpa, *King in Ann. Bot. Gard. Calc.* i. p. 170, t. 213.

KWANGTUNG: Pakwan (*Sampson*!); HONGKONG (*Champion*! *Wilford*, 337!). Mus. Brit.; Herb. Kew.

7. **Ficus clavata**, *Wall. Cat.* 4495; *Miq. in Hook. Lond. Journ. Bot.* vii. p. 431; *King in Ann. Bot. Gard. Calc.* i. p. 87, t. 111; *Hook. f. Fl. Brit. Ind.* v. p. 520.

Ficus trachycarpa, *Miq. loc. cit.* p. 430.

Ficus caudata, *Wall. Cat.* 4494 A; *Miq. loc. cit.* p. 431.

HUPEH: Ichang, Changyang and South Tunghu (*A. Henry*, 3347, 3497, 7490, 7843!); SZECHUEN: Omei, 3500 to 4000 ft. (*Faber*, 445!). Herb. Kew.

Lower slopes of the Himalayas, from the Sutlej Valley eastward to Burma, and southward in Malacca.

8. **Ficus erecta**, *Thunb. Diss.* Ficus *genus*, pp. 9 et 15; *Kæmpf. Ic. Sel.* t. 4; *Franch. et Savat. Enum. Pl. Jap.* i. p. 435, et ii. p. 490; *Maxim. in Mél. Biol.* xi. p. 328; *King in Ann. Bot. Gard. Calc.* i. p. 141 (quoad plantam typicam tantum); *Engler, Bot. Jahrb.* vi. p. 56.

Ficus pumila, *Thunb. Fl. Jap.* p. 33, non *Linn.*

Ficus japonica, *Blume, Bijdr.* p. 440, ex *Maxim.*

KWANGTUNG: without locality (*Ford*, 175, 177!), Lofaushan (*Ford*, 70!), Whampoa (*Hance*, 1453!); HAINAN (*A. Henry*, 8418!); COREA: Port Hamilton (*Wilford*, 682!); COREAN ARCHIPELAGO (*Oldham*, 789!); LUCHU ARCHIPELAGO (*Wright! Carpenter!*). Mus. Brit.; Herb. Kew.

The specimens from Lofaushan and Hainan are intermediate between this and *F. Beecheyana*, Hook. et Arn., and perhaps justify their union.

9. **Ficus fistulosa**, *Reinw. in Blume's Bijdr.* p. 470; *King in Ann. Bot. Gard. Calc.* i. p. 114, tt. 150 & 151, et *in Hook. f. Fl. Brit. Ind.* v. p. 525.

FORMOSA: Bankinsing mountains (*A. Henry*, 16, 499, 1759!). Herb. Kew.

Khasia mountains southward through the Malay Peninsula and Archipelago.

10. **Ficus formosana**, *Maxim. in Mél. Biol.* xi. p. 331; *King in Ann. Bot. Gard. Calc.* i. p. 153, t. 177 A.

FORMOSA: Tamsui (*Oldham*, 551!); Bankinsing (*A. Henry*, 24!); var. foliis supra medium 3–5-lobatis lobis acutis (*A. Henry*, 25!); var. foliis angustis (*A. Henry*, 497!); SZECHUEN (*Mesny*!). Herb. Kew.

If the above specimens are all correctly referred, the species is very variable in foliage and the ripe receptacles lose the restriction near the apex characteristic of the young state. There is also a specimen from the Min river, Szechuen (*Faber*, 444), which may belong to this species.

11. **Ficus foveolata**, *Wall. Cat.* 4493 A–E; *Miq. in: Ann. Mus. Bot. Lugd.-Bat.* iii. p. 294; *King in Ann. Bot. Gard. Calc.* i. p. 133 (excl. syn. F. Thunbergii, *Maxim.*, et F. impressa, *Benth.*), t. 166, et t. 167 E; *Hook. f. Fl. Brit. Ind.* v. p. 528, excl. syn. nonnulla.

Ficus nipponica, *Franch. et Savat. Enum. Pl. Jap.* i. p. 436, et ii. p. 491; *Maxim. in Mél. Biol.* xi. p. 338.

Ficus Wrightii, *Benth. Fl. Hongk.* p. 329.

Ficus foveolata, var. Henryi, *King in Hook. Ic. Pl.* t. 1824.

CHEKIANG: Ningpo mountains (*Faber*, 1664!); FORMOSA: Tamsui (*Oldham*, 546, 550!), Kelung (*C. Ford*, 35!); South Cape (*Schmürer*, hb. *A. Henry*, 942, 1972!); HUPEH: Ichang and immediate neighbourhood (*A. Henry*, 3122, 3302, 3552! and 3008, 3552 A! var. *Henryi*); SZECHUEN: Mount Omei (*Faber*, 448!), without exact locality (*Pratt*, 139!); KWANGTUNG: Lofaushan (*Bullock*, 82!); HONGKONG (*Wright*!). Mus. Brit.; Herb. Kew.

Outer Himalayas, from Chamba eastward, Khasia, Chittagong, Burma, and Japan.

This is another instance in which we have not followed Sir George King, because the Chinese *Ficus impressa*, Benth., is easily distinguished, though undoubtedly very closely allied.

12. **Ficus gibbosa**, *Blume, Bijdr.* p. 466; *King in Ann. Bot. Gard. Calc.* i. p. 4, tt. 2, 2 A et 2 B; *Hook. Fl. Brit. Ind.* v. p. 496.

Ficus parasitica, *Koen.* ex *Willd. in Mem. Acad. Berol.* 1798, p. 102, t 3.

Ficus cuspidifera, *Miq. in Hook. Lond. Journ. Bot.* vii. p. 434.

Ficus insularis, *Miq. loc. cit.* p. 435; *Maxim. in Mél. Biol.* xi. p. 332.

Ficus pumila, *Linn.?, Hook. et Arn. Bot. Beech. Voy.* p. 271.

FORMOSA: Tamsui (*Oldham*, 545, 552! *Watters*, 19!), Kelung (*Ford*, 36!); Bankinsing (*A. Henry*, 77!), South Cape (*Schmürer*, 316 A, 902!); KWANGTUNG: along the West River (*Sampson*, hb. *Hance*, 12040! *Ford*, 41!); HONGKONG (*Wright* 505!); HAINAN (*A. Henry*, 8400!); LUCHU ARCHIPELAGO (*Wright* 287!). Mus. Brit.; Herb. Kew.

Widely spread in India, Ceylon, Burmah, Malay Peninsula and Archipelago.

Sir George King (Ann. Bot. Gard. Calc. i. p. 182) refers *F. insularis*, Miq., from the Luchu Archipelago, partly to *F. Decaisneana*, Miq., partly to *F. gibbosa*, Blume; but we fail to detect any difference in them.

Maximowicz (Mél. Biol. xi. p. 332) refers Cuming's 1943, from the Philippine Islands, to *F. insularis*, and we think he is right, though King is of opinion that it belongs to *F. subulata*, Blume. Further, we consider *F. philippinensis*, Miq. (Cuming, 1937), is the same as *F. insularis*, Miq., and *F. gibbosa*, Blume.

13. **Ficus Harlandi**, *Benth. Fl. Hongk.* p. 330; *Maxim. in Mél. Biol.* xi. p. 330; *King, Ann. Bot. Gard. Calc.* i. p. 113, t. 148.

FORMOSA (*Oldham*, 543!); KWANGTUNG: Pakwan above Canton (*Sampson* ex *Maximowicz*); HONGKONG (*Harland*! *Wright*!). Mus. Brit.; Herb. Kew.

There is a specimen in the Kew Herbarium from the Bankinsing mountains, Formosa (*A. Henry*, 1759), which we have little doubt belongs to this species, the leaves being exactly the same; but the very young inflorescence shows that the figs are borne in branched clusters about six inches long, and evidently produced from the trunk or thick branches. Dr. Henry's 16 and 499, from the same locality, probably also belong to *Ficus Harlandi*. The bark of n. 16 is described as very thick, and is used by the savages to make cooking-vessels.

14. **Ficus heteromorpha**, *Hemsl. in Hook. Ic. Pl.* tt. 2533–34.

KIANGSI: Kiukiang, Lushan (*Bullock*, 227, 228!); HUPEH: Ichang, Nanto, Hsingshan, and Chienshih (*Henry*, 1933, 3439, 3924, 3965, 6362, 6550, 7443!); SZECHUEN: South Wushan (*A. Henry*, 5541!), chiefly near Tachienlu, at 9000–13,500 ft. (*Pratt*, 719!). Mus. Brit.; Herb. Kew.

15. **Ficus heterophylla**, *Linn. f. Suppl.* p. 442; *King in Ann. Bot. Gard. Calc.* i. p. 75, t. 94, et *in Hook. f. Fl. Brit. Ind.* v. p. 518; *Wight, Ic. Pl. Ind. Or.* t. 659.

HAINAN (*A. Henry*, 8280!). Herb. Kew.

Throughout tropical India to Ceylon, Burma, and Malaya.

An exceedingly polymorphic species, of which King cites at least a dozen synonyms, one of which, *F. grossularioides*, Burm. (Fl. Ind. p. 227), is older than that generally adopted.

16. **Ficus hirta**, *Vahl, Enum. Pl.* ii. p. 201; *Benth. Fl. Hongk.* p. 329; *Maxim. in Mél. Biol.* xi. p. 330; *King in Ann. Bot. Gard. Calc.* i. p. 149, t. 188 et t. 189 (var. Roxburghii); *Miq. Fl. Ind. Bat.* i. pars 2, p. 297, t. 18; *Hook. f. Fl. Brit. Ind.* v. p. 531; *Wight, Ic. Pl. Ind. Or.* t. 672.

Ficus Roxburghii, *Miq. in Hook. Lond. Journ. Bot.* vii. p. 456, non *Wall.*

Ficus setosa, *Blume, Bijdr.* p. 477; *Hook. et Arn. Bot. Beech. Voy.* p. 216, t. 49.

Ficus hibiscifolia, *Champ. in Hook. Kew Journ. Bot.* vi. p. 77.

SZECHUEN: Min river (*Faber*, 450!); KWANGTUNG: Lofaushan and other localities (*Ford*, 174!), Whampoa (*Hance*, 1104!); HONGKONG (*Champion*! *Wright*! *Wilford*, 390! *Seemann*! *Harland*!); HAINAN (*A. Henry*, 8130, 8610, 8642!). Mus. Brit.; Herb. Kew.

Eastern India, Burma, Malay Peninsula and Archipelago.

An exceedingly variable species in the foliage, and the Chinese specimens exhibit the full range of this variation. The form described as *Ficus hibiscifolia* by Champion is a very distinct one, with leaves deeply palmately divided into five narrow lobes, of which the lateral ones are much shorter than the others.

17. **Ficus hispida**, *Linn. f. Suppl.* p. 442; *Benth. Fl. Hongk.* p. 329; *Maxim. in Mél. Biol.* xi. p. 330; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 282 et 296; *King in Ann. Bot. Gard. Calc.* i. p. 116, tt. 154 et 155; *Hook. f. Fl. Brit. Ind.* v. p. 522.

Ficus oppositifolia, *Willd. Sp. Pl.* iv. p. 1151; *Roxb. Corom. Pl.* t. 124; *Wight, Ic. Pl. Ind. Or.* t. 638.

Covellia oppositifolia, dæmonum, hispida, dasycarpa, etc., *Miq. in Hook. Lond. Journ. Bot.* vii. pp. 461–564.

HONGKONG (*Seemann*, 2413! *Harland*!). Herb. Kew.

Throughout India and Malaya, and extending to North Australia.

It is singular that this exceedingly common fig has not been collected within our limits except in Hongkong.

18. **Ficus impressa**, *Champ. in Hook. Kew Journ. Bot.* vi. p. 76; *Benth. Fl. Hongk.* p. 328; *Maxim. in Mél. Biol.* xi. p. 340.

Ficus foveolata, var. impressa, *King in Ann. Bot. Gard. Calc.* i. p. 134, t. 167 F.

KIANGSI: Kiukiang (*Maries*!); CHEKIANG: Ningpo mountains (*Faber*, 250!); HUPEH: Ichang Gorge (*Maries*!), Ichang, Patung, Nanto, and other localities (*A. Henry*, 1095, 2691, 3012, 3698, 6506!). Mus. Brit.; Herb. Kew.

This is so uniform in character from all the localities cited above that we have thought it desirable to keep it separate, rather than unite it to *F. foveolata*, Wall., as a variety of that species.

Dr. Henry describes *F. impressa*, Champ., as sometimes climbing, sometimes hanging down walls of cliffs.

19. **Ficus infectoria**, *Roxb.* (non *Willd.*) *Fl. Ind.* iii. p. 550, excl. syn. *Rheed.*, fide *King in Ann. Bot. Gard. Calc.* i. p. 60, tt. 75, 76, 77, 78, et 79; *Hook. f. Fl. Brit. Ind.* v. p. 515; *Wight, Ic. Pl. Ind. Or.* t. 665.

Urostigma infectoria, *Miq. Fl. Ind. Bat.* i. pt. 2, p. 339.

HUPEH: Wanlu on the Yangtze, Patung district (*A. Henry*, 7173!); SZECHUEN: Chungking (*F. S. A. Bourne*! *Faber*!). Herb. Kew.

Throughout tropical India and Ceylon, and widely spread in Malaya.

This is the *huang-ko*, commonly planted near shrines. Dr. Henry notes that it is common in East Szechuen, but that it apparently does not occur east of Patung in Hupeh. The Chinese specimens are all of the typical form.

20. **Ficus Kingiana**, *Hemsl. in Hook. Ic. Pl.* t. 2535.

FORMOSA: Tamsui (*Oldham*, 547, 548!); Kelung (*Ford*, 40!), Takow (*A. Henry*, 708, 708 A!), Bankinsing (*A. Henry*, 166!), South Cape (*Schmürer*, hb. *Henry*, 925, 1337!). Mus. Brit.; Herb. Kew.

21. **Ficus Kurzii**, *King in Ann. Bot. Gard. Calc.* i. p. 47, t. 57, et *in Hook. f. Fl. Brit. Ind.* v. p. 509.

YUNNAN: Poneline (*Anderson*!). Herb. Kew.

Burma and Java.

The locality given above is close on the frontier of China, but perhaps really in Burma.

22. **Ficus leucantatoma**, *Poir. in Lam. Encycl. Suppl.* ii. p. 654; *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. pp. 283, 296; *King in Ann. Bot. Gard. Calc.* i. p. 119, t. 157.

Ficus rapiformis, *Roxb. Fl. Ind.* iii. p. 551; *Wight, Ic. Pl. Ind. Or.* t. 637.

Ficus septica, *Rumph. Herb. Amb.* iii. p. 153, t. 96; *Maxim. in Mél. Biol.* xi. p. 335.

Ficus radiata, *Decne. in Nouv. Ann. Mus. Par.* iii. p. 494.

Covellia radiata, *Miq. in Fl. Ind. Bat.* i. pt. 2, p. 328.

Ficus Oldhami, *Hance in Ann. Sc. Nat.* 5^{me} série, v. p. 242; *Maxim. in Mél. Biol.* xi. p. 335.

Covellia venosa *et* C. rapiformis, *Miq. in Hook. Lond. Journ. Bot.* vii. pp. 464 et 468.

FORMOSA: Tamsui (*Oldham*, 542, 553!), Kelung (*Ford*, 38!), Ape's Hill, Takow (*Playfair*, 165, 199!), without locality (*Swinhoe*!), Tamsui (*Morse*, hb. *A. Henry*, 1731!); Luchu Archipelago (*Wright*!). Mus. Brit.; Herb. Kew.

Java to Timor, and in the Bonin Islands.

23. **Ficus nervosa**, *Heyne in Roth's Nov. Sp. Pl.* p. 388; *Benth. Fl. Hongk.* p. 327; *Maxim. in Mél. Biol.* xi. p. 333; *Hook. f. Fl. Brit. Ind.* v. p. 512; *King in Ann. Bot. Gard. Calc.* i. p. 53, t. 65; *Wight, Ic. Pl. Ind. Or.* t. 660 (angustifolia).

Urostigma nervosum, *Miq. in Hook. Lond. Journ. Bot.* vi. p. 585.

Ficus angustifolia, *Seem. Bot. Voy. 'Herald,'* p. 412, an *Roxb.*?

FORMOSA: Kelung (*Ford*, 39!), South Cape (*A. Henry*, 1999!), Bankinsing mountains (*A. Henry*, 116, 416, 1679!); KWANGTUNG: Lantao Island (*Ford's native collector*, 40, 1888!); HONGKONG (*Champion*! *Seemann*! *Wright*!). Mus. Brit.; Herb. Kew.

Eastern India, Burma, Malay Peninsula and Archipelago.

Seemann and Bentham both refer *F. angustifolia*, Roxb., to this species; but King refers it to *F. glaberrima*, Blume, yet citing Wight's plate 660 under *F. nervosa*.

24. **Ficus obscura**, *Blume, Bijdr.* p. 474; *King in Ann. Bot. Gard. Calc.* i. p. 81, tt. 102 et 103, et *in Hook. f. Fl. Brit. Ind.* v. p. 521.

FORMOSA: Bankinsing (*A. Henry*, 124!). Herb. Kew.

Eastern India, Burma, and Malaya.

The Formosa plant does not agree exactly with any of the specimens at Kew referred to this species, but there is no obvious character to separate it.

25. **Ficus obtusifolia,** *Roxb. Fl. Ind.* iii. p. 546; *King in Ann. Bot. Gard. Calc.* i. p. 42, t. 49, et *in Hook. f. Fl. Brit. Ind.* v. p. 507; *Wight, Ic. Pl. Ind. Or.* t. 662.

YUNNAN: Poneshee (*Anderson* !). Herb. Kew.

Eastern India, Burma, and Malay Peninsula.

26. **Ficus pandurata,** *Hance in Ann. Sc. Nat.* 4^{me} série, xviii. p. 229; *Maxim. in Mél. Biol.* xi. p. 345; *King in Ann. Bot. Gard. Calc.* i. p. 141, t. 177 B.

KWANGTUNG: near Canton (*Sampson* !), Dane's Island, Whampoa (*Hance*, 6480 !). Mus. Brit.; Herb. Kew.

27. **Ficus parvifolia,** *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 286.

Urostigma parvifolium, *Miq. in Hook. Lond. Journ. Bot.* vi. p. 570, et *Fl. Ind. Bat.* i. pt. 2, p. 343.

SOUTH-WEST CHINA: Hsinhsing (*Bourne* !). Herb. Kew.

Philippine Islands.

Sir George King (Ann. Bot. Gard. Calc. i. p. 49) refers *F. parvifolia*, Miq., to *F glabella*, Blume, and perhaps correctly, but he also refers the very different *F. Wightiana*, Benth., to the same species. Typical *glabella*, as figured by King and represented in the Kew Herbarium by specimens from Leyden, has thicker oblanceolate leaves and sessile receptacles.

[*Ficus pertusa*, Linn. fil., is recorded from China by Lamarck, *Encycl.* ii. p. 496, but no doubt erroneously.]

28. **Ficus pomifera,** *Wall.*; *King in Ann. Bot. Gard. Calc.* i. p. 171, t. 215.

SOUTH-WEST CHINA (*Bourne*, 50 !). Herb. Kew.

This is rather different from anything previously in the Kew Herbarium, but it is very closely allied to the Indian *F. pomifera*, if not actually the same. It is probably the species figured as "innominatus fructus" by Boym, *Fl. Sin.* fol. P.

29. **Ficus pumila,** *Linn. Sp. Pl.* ed. 1, p. 1060; *Maxim. in Mél. Biol.* xi. p. 342; *Kæmpf. Amœn. Exot.* t. 804; *King in Ann. Bot. Gard. Calc.* i. p. 124, t. 158; *Hance in Journ. Bot.* 1866, p. 54.

Ficus stipulata, *Thunb., et* F. pumila, *Thunb. Ficus*, pp. 8 et 9; *Hance, loc. cit.*

Ficus Hanceana, *Maxim. in Mél. Biol.* xi. p. 341.

Ficus erecta, *Auctor. plur. sed non Thunb.*

Tenorea heterophylla, *Gasp. Nov. Gen. Fici*, p. 6, et *Ricerche Caprif. e Fic.* p. 81.

Plagiostigma stipulata *et* P. pumila, *Zucc. in Abh. Akad. Muench.* iv. 3, p. 154.

Ficus stipulata, *Thunb.*; *Seem. Bot. Voy. 'Herald,'* p. 413.

Kiangsu: Shanghai hills (*Carles*, 371 !); Chekiang: Ningpo (*Oldham*, 81 !); Kiangsi: Kiukiang (*Bullock* !); Fokien: Amoy (*Hance*, 1457 !); Formosa (*Oldham*, 549 !), Takow (*Playfair*, 424 !), South Cape (*Schmürer*, hb. *A. Henry*, 1370 !), Apes' Hill, Takow (*A. Henry*, 1159 !). Hupeh: Nanto and mountains to the northward (*A. Henry*, 3806 !); Kwangsi (*Mesny* !); Kwangtung: Macao (*Hance*, 1457 !), without locality (*Millett* !), Lofaushan (*Ford* !); Luchu Archipelago (*Wright* !). Mus. Brit.; Herb. Kew.

Japan.

30. **Ficus pyriformis**, *Hook. et Arn. Bot. Beech. Voy.* p. 216; *Miq. in Hook. Lond. Journ. Bot.* vii. p. 437, t. 6. fig. A; *Benth. in Hook. Kew Journ. Bot.* vi. p. 75, et *Fl. Hongk.* p. 328; *Maxim. in Mél. Biol.* xi. p. 336; *King in Ann. Bot. Gard. Calc.* i. p. 157, tt. 200, 201, excl. syn. F. Abelii.

Ficus Millesii, *Miq. in Hook. Lond. Journ. Bot.* vii. p. 438.

Ficus Millettii, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 281.

Ficus ischnopoda, *Miq.*, *et* F. subpyriformis, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 229.

Fokien: Foochow (*Carles*, 191); Formosa: Tamsui (*Oldham*, 536 !); Szechuen: Min river (*Faber*, 443 !); Kwangtung: without locality (*Millett* ! *Seemann* !), Whampoa (*Hance*, 6059 !); Hongkong (*Wilford* ! *Champion* ! *Hinds* ! *Wright*). Mus. Brit.; Herb. Kew.

Assam, Khasia, Burma, and Malaya.

31. **Ficus ramentacea**, *Roxb. Fl. Ind.* iii. p. 547; *King in Ann. Bot. Gard. Calc.* i. p. 135, t. 169, et *in Hook. f. Fl. Brit. Ind.* v. p. 528.

Kwangtung (*Ford*, 176 !). Herb. Kew.

Eastern India, Burma, and Malaya.

32. **Ficus retusa**, *Linn. Mant.* p. 129; *Benth. Fl. Hongk.* p. 327; *Maxim. in Mél. Biol.* xi. p. 337; *King in Ann. Bot. Gard. Calc.* i. p. 50, t. 61, et *in Hook. f. Fl. Brit. Ind.* v. p. 511.

Ficus nitida, *Thunb. Ficus*, p. 10; *Wight, Ic. Pl. Ind. Or.* t. 642; *King, loc. cit.* tt. 62 et 84.

Urostigma retusum, *Miq. in Hook. Lond. Journ. Bot.* vi. p. 581.

Urostigma nitidum, *Miq. Fl. Ind. Bat.* i. pt. 2, p. 345.

Urostigma pisiferum, *Miq. in Hook. Lond. Journ. Bot.* vi. p. 580.

CHINA: without locality (*Staunton*!); FORMOSA: Apes' Hill (*Playfair*, 168!); without locality (*Oldham*, 56!); SOUTH-WESTERN CHINA: Hsinhsing (*Bourne*!); HONGKONG (*Champion*! *Wright*!); HAINAN (*A. Henry*, 51!); LUCHU ARCHIPELAGO (*Weyrich* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

Widely spread in India and Malaya, and extending to New Caledonia.

33. **Ficus Roxburghii**, *Wall. Cat.* 4508; *King in Ann. Bot. Gard. Calc.* i. p. 168, t. 211, et *in Fl. Brit. Ind.* v. p. 534; *Wight, Ic. Pl. Ind. Or.* t. 673.

FORMOSA: South Cape (*Schmürer*, hb. *A. Henry*, 1310!); HAINAN (*B. C. Henry*, 50!). Herb. Kew.

Outer Himalayas from the Indus eastward, Assam, Khasia, and Burma.

34. **Ficus Sieboldii**, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 199, iii. p. 295; *Maxim. in Mél. Biol.* xi. p. 327; *Franch. et Savat. Enum. Pl. Jap.* i. p. 435, ii. p. 490.

Ficus erecta, var. Sieboldii, *King in Ann. Bot. Gard. Calc.* i. p. 142, t. 178 B.

FORMOSA: Tamsui (*Oldham*, 552½!). Herb. Kew.

Japan.

Oldham's specimen consists of a sterile branch, which, as Sir George King has written on the sheet, is a form connecting *F. Beecheyana* with *F. Sieboldii*. Still we have not considered it desirable to unite them here.

35. **Ficus stenophylla**, *Hemsl. in Hook. Ic. Pl.* t. 2536.

HUPEH: Yangtzekiang, Min river (*Faber*, 446!), Nanto, and Ichang (*A. Henry*, 2963, 4350, 4350 A!); HAINAN (*A. Henry*, 8716!). Mus. Brit.; Herb. Kew.

36. **Ficus subulata**, *Blume, Bijdr.* p. 461; *King in Ann. Bot. Gard. Calc.* i. p. 8, t. 6, et *in Hook. f. Fl. Brit. Ind.* v. p. 497.

KWANGTUNG: Lofaushan (*Ford*, 4!). Herb. Kew.

Eastern India, from Chittagong southward through the Malay Peninsula and Archipelago, including the Philippine Islands.

37. **Ficus Swinhoei,** *King in Ann. Bot. Gard. Calc.* i. p. 81, t. 101 c.

FORMOSA: Takow (*Swinhoe,* 74! *Playfair,* 161!), from the same locality, "covering the rocks" (*A. Henry,* 316!). Mus. Brit.; Herb. Kew.

38. **Ficus Tikoua,** *Bureau in Morot's Journ. de Bot.* ii. 1888, p. 213, t. 7; *Rev. Hort.* 1888, p. 508; *Bretschn. Hist. Europ. Bot. Disc.* p. 908.

HUPEH: Ichang and immediate neighbourhood (*A. Henry,* 3524, 4161!); YUNNAN: rocky hills with a northern and eastern aspect, above Lake Lonkong (*Delavay*). Herb. Kew.

Ti koua is the native name of this fig in Yunnan, according to the Abbé Delavay, and Dr. Henry notes that it is called *Ti Fang Kên* in or near Ichang. It is a singular trailing species with underground fruit, which both collectors say is eatable. The leaves of the Ichang specimens vary very much in size; the blade being from three-quarters to three inches in length; and the petiole from a quarter to an inch and a half in length, whereas the largest in the figure cited above is less than an inch in length.

39. **Ficus vaccinioides,** *Hemsl. et King in Ann. Bot. Gard. Calc.* i. p. 126, t. 159 A.

FORMOSA: without locality (*Oldham,* 535!).

The Kew specimen of this species has been mislaid.

40. **Ficus variolosa,** *Lindl.* ex *Benth. in Hook. Lond. Journ. Bot.* i. p. 492, et *Fl. Hongk.* p. 328; *Maxim. in Mél. Biol.* xi. p. 336; *King in Ann. Bot. Gard. Calc.* i. p. 153, t. 193.

KWANGTUNG: mountains of Palawan (*Hance*!); HONGKONG (*Hinds*! *Harland*! *Wright*!). Mus. Brit.; Herb. Kew.

Malaya and Boninsima.

41. **Ficus vasculosa,** *Wall. Cat.* n. 4482; *Miq. in Hook. Lond. Journ. Bot.* vii. p. 454; *King in Ann. Bot. Gard. Calc.* i. p. 65, t. 86.

Ficus Championi, *Benth. in Hook. Kew Journ. Bot.* vi. p. 76, et *Fl. Hongk.* p. 328; *Maxim. in Mél. Biol.* xi. p. 336.

HONGKONG (*Champion*! *Wright*!); HAINAN (*A. Henry*!). Mus. Brit.; Herb. Kew.

Burma, Malay Peninsula, and Java.

42. **Ficus Wightiana**, *Benth. Fl. Hongk.* p. 327, an *Wall.*?; *Maxim. in Mél. Biol.* xi. p. 333.

Ficus superba, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 287; *King in Ann. Bot. Gard. Calc.* i. p. 59, t. 72, et t. 84 z.

Urostigma superbum, *Miq. Pl. Jungh.* p. 46.

Ficus superba, var. japonica, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* ii. p. 200; *Franch. et Savat. Enum. Pl. Jap.* i. p. 436.

FORMOSA: Kelung (*Oldham*, 538!), Takow Plain (*Playfair*, 167! *A. Henry*, 1879, 2030!); HONGKONG (*Wilford*, 223!); LUCHU ARCHIPELAGO (*Wright*!). Mus. Brit.; Herb. Kew.

Japan.

Sir George King refers (Ann. Bot. Gard. Calc. i. p. 49) *Ficus Wightiana*, Benth., to *F. glabella*, Blume.

1. **Cudrania crenata**, *C. H. Wright*, n. sp.

Caulis lignosus, primum pubescens. *Folia* obovata, acuminata vel obtusa, basi anguste obtusa, crenata, supra minute pubescentia, subtus glabra, 4 poll. longa, $1\frac{1}{2}$–2 poll. lata, brevissime petiolata. *Capitula* ♂ ad axillas per paria breviter pedunculata. *Perianthii* segmenta ovata, concava. *Antheræ* erectæ. *Ovarii* rudimentum conicum. *Capitula* ♀ non visa.

HAINAN (*A. Henry*, 8389!). Herb. Kew.

The crenate leaves are larger in this than in any other Chinese species

2. **Cudrania javanensis**, *Trécul in Ann. Sci. Nat.* 3 sér. viii. p. 123; *Brandis, For. Flor.* p. 425; *Benth. Flor. Austral.* vi. p. 179; *Hook. f. Fl. Brit. Ind.* v. p. 538 ex parte.

Cudranus, *Rumph. Herb. Amboin.* v. p. 25, t. 16.

Plecospermum cuneifolium, *Thw. in Hook. Kew Journ. Bot.* vi. p. 303.

FORMOSA: Bankinsing (*A. Henry*, 135, 135 B!), Tamsui (*A. Henry*, 135 A!); HAINAN (*A. Henry*, 8228!). Herb. Kew.

Eastern Africa, India, Malaya, and Australia.

An extremely polymorphic species. The leaves of the Formosan specimens are obtuse at the apex and acute at the base.

3. **Cudrania obovata**, *Trécul in Ann. Sci. Nat.* 3^{me} sér. viii. p. 126.

FORMOSA: Tamsui (*Oldham*, 532!), Apes' Hill (*Playfair*, 346 A!), Takow (*A. Henry*, 720 A, B, & C!), Bankinsing (*A. Henry*, 164!); HAINAN (*Swinhoe*! *B. C. Henry*, 82!); LUCHU ARCHIPELAGO (*Wright*, 315!). Mus. Brit.; Herb. Kew.

Philippines.

4. **Cudrania rectispina**, *Hance in Journ. Bot.* 1873, p. 365.

KWANGTUNG: Lofaushan, 800 ft. (*Ford*, 142!); HONGKONG: Wongneichung (*Lamont*, 1102! 19216 in hb. *Hance*!). Mus. Brit.; Herb. Kew.

5. **Cudrania triloba**, *Hance in Journ. Bot.* 1868, p. 49; *Forbes in Journ. Bot.* 1883, p. 146; *Hook. Ic. Pl.* t. 1792; *Franch. Pl. David.* i. p. 270; *Franch. in Mém. Soc. Sc. Nat. Cherb.* xxiv. p. 253; *Kew Bulletin*, 1888, p. 291.

Cudrania tricuspidata, *Bur. in Lavallée, Arb. Segrez.* p. 243.

Maclura tricuspidata, *Carr. in Rev. Hort.* 1864, p. 390, fig. 37, and 1872, p. 55, fig. 7.

SHANTUNG (*Stanton*! *Graves*, 13250!), Fengwangshan (*Forbes*!), Chefoo (*Fauvel* ex *Franchet*); KIANGSU (*Poli* ex *Franchet*), Shanghai (*Carles*, 194!); CHEKIANG: Ningpo (*Faber*! *Cooper*!); KIANGSI: Kiukiang (*David* ex *Franchet*); HUPEH: Ichang (*A. Henry*, 500, 1334, 2322, 2322 A, 3140!), Nanto (*A. Henry*, 2102!); KWANGTUNG: Michau (*Ford*!); HONGKONG: West River (*Ford*!); COREAN ARCHIPELAGO: Hooper Island and Kupee Harbour (*Oldham*, 792, 1074!). Mus. Brit.; Herb. Kew.

This is the "Silkworm Thorn" or "Tsa Tree," the leaves of which are used for feeding silkworms when the supply of Mulberry leaves fails. A full account of the Chinese names of this tree will be found in the paper by Mr. F. B. Forbes quoted above.

[*Vanieria chinensis*, Lour. Flor. Cochin. p. 565 (*Procris cantoniensis*, Spreng. Syst. iii. p. 846), said to be a native of Canton, is a doubtful plant, probably allied to *Cudrania*.]

1. **Artocarpus hypargyræa**, *Hance* ex *Benth. Flor. Hongk.* p. 325.

HONGKONG (*Lamont*, 696! *Hance*, 4484!). Mus. Brit; Herb. Kew.

2. **Artocarpus integrifolia**, *Linn. fil. Suppl.* p. 412; *Roxb. Corom. Pl.* t. 250; *Bot. Mag.* tt. 2833–4; *Bretschn. Early Res.* p. 174.

Polyphema Jaca, *Lour. Flor. Cochin.* p. 546.

HONGKONG (*Hance*, 1185!); HAINAN (*Swinhoe* ex *Bretschneider*, *A. Henry*?). Mus. Brit.

"Swinhoe saw the tree cultivated in Hainan."—*Bretschneider*, *loc. cit.* A specimen in Kew Herbarium, collected by Dr. A. Henry in Hainan, may belong to this species, but the fruit is too imperfect to decide with certainty. Dr. Henry states that the tree was 10 feet high and bore edible fruit.

URTICACEÆ: CONOCEPHALEÆ.

(By C. H. WRIGHT, A.L.S.)

1. **Conocephalus sinensis**, *C. H. Wright.*

Folia ovata, obtusa, basi rotundata, supra scabra, subtus glabra, 10 poll. longa, 5½ poll. lata, venis secundariis circa 9-jugis, suboppositis, rectis, reliquis dense reticulatis; petiolus 3 poll. longus. *Inflorescentia feminea*: *Pedunculus* 4 lin. crassus. *Bracteæ* triangulares, 1 poll. longæ. *Capitula* globosa, 15 lin. diam. *Pedicelli* 5 lin. longi, crassi. *Perianthium* subcylindricum, 2 lin. longum, minute 4-fidum.

YUNNAN: Mengtze (*A. Henry*, 11074!). Herb. Kew.

Near to *C. amœnus*, King in Hook. f. Fl. Brit. Ind. v. p. 545, a native of the Malay Peninsula.

URTICACEÆ: URTICEÆ.

(By C. H. WRIGHT, A.L.S.)

1. **Urtica cannabina**, *Linn. Sp. Pl.* p. 984; *Ledeb. Flor. Ross.* iii. p. 638; *DC. Prodr.* xvi. 1, p. 49; *Maxim. Prim. Flor. Amur.* p. 485; *Maxim. in Mél. Biol.* ix. p. 619; *Hance in Journ. Bot.* 1874, p. 262; *Franch. Pl. David.* i. p. 271; *Kanitz, Bot. Res. Exped. Széchenyi*, p. 9.

Urtica foliis oppositis tripartitis incisis, *Linn. Hort. Upsal.* p. 282.

CHIHLI: Peking (*Bretschneider*, 683! 683 *b*! *David*, 537 ex *Franchet*; hb. *Hance*, 14523!); SHINGKING: Jaoling (*Ross*, 398!); SHENSI (*Piasezki* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

North Asia, Turkestan, Persia.

2. **Urtica cordatifolia**, *Steud. in Flora*, xxxiii. (1850) p. 258; *Walp. Ann.* iii. p. 411.

HONGKONG (*Fortune*, 54, ex *Steudel*).

I have seen no specimen of this plant, which Steudel describes as having alternate leaves, and therefore probably belongs to another genus. The flowers are not described.

3. **Urtica dioica**, var. **angustifolia**, *Ledeb. Fl. Alt.* iv. p. 241; *DC. Prod.* xvi. 1, p. 52; *Hance in Journ. Bot.* 1875, p. 135; *Maxim. in Mél. Biol.* ix. p. 619; *Franch. Pl. David.* i. p. 271.

Urtica angustifolia, *Fisch. in Hornem. Hort. Hafn. Suppl.* p. 107.

Chihli: Peking (*David*, 2315 ex *Franchet*), Pohuashan (*Bretschneider*, 682!), Nankau Pass (*Williams* in hb. *Hance*, 14582); Shantung: Tsien mountains (*Faber*, 1750!); Hupeh: Chienshih (*A. Henry*, 5859!); Yunnan (*Anderson*!). Mus. Brit.; Herb. Kew.

Japan.

A form near subvar. *hispida*, Wedd. (DC. Prodr. xvi. 1. p. 50) has been collected in South Patung by Dr. A. Henry (no. 5401). The leaves are broadly cordate, with the whole margin regularly dentate.

4. **Urtica lætevirens**, *Maxim. in Bull. Acad. Pétersb.* xxii. (1877) p. 236; *Franch. et Savat. Enum. Pl. Jap.* ii. p. 491.

Shantung: Tsien mountains (*Faber*, 1748!). Herb. Kew.

Japan.

5. **Urtica parviflora**, *Roxb. Hort. Beng.* p. 67; *Flor. Ind.* iii. 581; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 85; *DC. Prod.* xvi. 1, p. 55; *Wight, Icon.* t. 690; *Hook. f. Fl. Brit. Ind.* v. p. 548.

Urtica ardens, *Link, Enum.* ii. p. 385.

Urtica himalayensis, *Kunth & Bouché in Ann. Sci. Nat.* 3me sér. vii. p. 182.

Urtica virentula, *Wall. Cat.* no. 4586.

— Yunnan: Fengchenlin (*A. Henry*, 11197!). Herb Kew.

Himalayan Region.

6. **Urtica Thunbergiana**, *Sieb. et Zucc. Abh. Akad. Muench.* iv. iii. (1846) p. 214; *DC. Prod.* xvi. 1, p. 55; *Walp. Ann.* i. p. 642; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 80.

Urtica dioica, *Thunb. Flor. Jap.* p. 69, non *Linn.*

Hupeh: Ichang (*A. Henry*, 2900!); Yunnan: Mengtze — (*A. Henry*, 9065 A–B!). Herb. Kew.

Japan.

7. **Urtica urens**, *Linn. Sp. Plant.* p. 984; *DC. Prodr.* xvi. 1, p. 40; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 58.

CHEKIANG: Ningpo (*Savatier* ex *Franchet*).

Europe, North Africa, Temperate Asia.

8. **Urtica** sp.

SHINGKING: Kwandien mountains (*Ross*, 93!), east of Fungchung (*Ross*, 132, 210!).

These specimens, which are destitute of flower or fruit, have a very different facies to any other Chinese species, but may prove to belong to a variety of *U. urens*, L. They resemble *Nanocnide japonica*, Blume, but have opposite leaves.

1. **Nanocnide japonica**, *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 155, t. 17; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 290; *DC. Prod.* xvi. 1, p. 69; *Maxim. in Mél. Biol.* ix. p. 627.

CHEKIANG: Tientai mountains (*Faber*, 287!); FORMOSA: Tamsui (*Oldham*, 517!, *Swinhoe*!); HUPEH: South Patung (*A. Henry*, 5280!), Nanto (*A. Henry*, 3841!); COREA: Port Hamilton (*Wilford*, 708, 983! *Oldham*, 766!). Mus. Brit.; Herb. Kew.

Japan.

2. **Nanocnide lobata**, *Wedd. in DC. Prod.* xvi. 1, p. 69; *Maxim. in Mél. Biol.* ix. p. 627.

CHEKIANG: Ningpo mountains (*Faber*, 1661!); LUCHU ARCHIPELAGO (*Wright*, 301!). Herb. Kew.

1. **Fleurya interrupta**, *Gaud. in Freycin. Voy., Bot.* p. 497; *DC. Prodr.* xvi. 1, p. 74; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 115.

Urtica interrupta, *Linn. Sp. Plant.* p. 985; *Lour. Flor. Cochin.* p. 557.

CHINA: without locality (ex *Loureiro*); FORMOSA: Bankinsing (*A. Henry*, 386!); HONGKONG: Mount Gough (*W. J. Tutcher*, 561!). Herb. Kew.

Extending from Abyssinia through India and Malaya to Polynesia.

A specimen from the Patung district of Hupeh (*A. Henry*, 4748) probably belongs to this species.

✓ 1. **Laportea grossedentata**, *C. H. Wright*, n. sp.

Herba monoica, radice tuberis fusiformibus prædita. *Caulis* erectus, glaber, bipedalis. *Folia* ovata vel orbiculata, grosse dentata, basi cordata, apice subito angustissimeque acuminata, subglabra; petiolus tenuis, lamina æquilongus; stipulæ deciduæ. *Paniculæ* inferiores masculæ, superiores femineæ, floribus glomeratis. *Fl.* ♂: *Perianthium* extus pubescens, lobis 5 ovatis. *Ovarii* rudimentum turbinatum. *Fl.* ♀: *Perianthium* 4-lobatum, lobis 2 exterioribus ovatis quam interioribus lanceolatis acuminatis minoribus. *Ovarium* oblongum; stylus hirsutus, primum rectus, demum deflexus. *Fructus* non visus.

Hupeh: Patung (*A. Henry*, 4691, 6066, 6077 !). Mus. Brit.; Herb. Kew.

In the axils of many of the leaves are situated woody subulate bodies about ¼ in. long, which may be galls.

2. **Laportea oleracea**, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 141; *DC. Prod.* xvi. 1, p. 87; *Hook. f. Fl. Brit. Ind.* v. p. 549.

Yunnan: Fengchenlin mountains, 7000 feet (*A. Henry*, 11198 !). Herb. Kew.

Sikkim Himalaya.

3. **Laportea pterostigma**, *Wedd. in DC. Prod.* xvi. 1, p. 87; *Maxim. in Mél. Biol.* ix. p. 622.

Formosa (*Swinhoe*, 37 !), Ape's Hill (*Playfair*, 346 !). Herb. Kew.

✓ 4. **Laportea sinensis**, *C. H. Wright*, n. sp.

Herba caulibus lævibus.—Pl. ♂: *Folia* late lanceolata, longe acuminata, grosse serrata, basi rotundata, nervis hirsutis, petiolo lamina æquilongo. *Paniculi* quam folia breviores. Lobi *perianthii* 5, ovati. Pl. ♀: *Folia* lanceolata, longe acuminata, basi acuta, glabra, petiolo lamina sæpissime breviore. *Paniculi* quam folia longiores; pedicelli 2-alati. Lobi *perianthii* 4, exteriores minuti, interiores multo majores ovati acuti. *Fructus* (a latere visus) obtuse triangularis, stylo recurvato coronatus.

Hupeh: Patung (*A. Henry*, 4942, 7364 !); Szechuen: South Wushan (*A. Henry*, 7212 !), Mount Omei (*Faber*, 436 !), near Tachienlu (*Pratt*, 111 !). Mus. Brit.; Herb. Kew.

Not so robust a plant as *Laportea oleracea*, Wedd., and having much narrower leaves, acute at the base, and more produced at the apex.

1. **Girardinia cuspidata,** *Wedd. in DC. Prod.* xvi. 1, p. 103; *Hance in Journ. Linn. Soc.* xiii. p. 86; *Maxim. in Mél. Biol.* ix. p. 626; *Franch. Pl. David.* i. p. 272.

Urtica sp. nov., *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477.

CHIHLI: Nankau pass, 30 miles west of Peking (*Williams* ex *Hance*), Peking (*Bretschneider*, 680–681!). Herb. Kew.

Mongolia.

2. **Girardinia palmata,** *Gaud. in Freycin. Voy., Bot.* p. 498 (1826).

Girardinia heterophylla, *Decne. in Jacquem. Voy., Bot.* p. 151, t. 153; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 164; *DC. Prod.* xvi. 1, p. 100; *Hook. f. Fl. Brit. Ind.* v. p. 550.

Urtica palmata, *Forsk. Fl. Ægypt.-Arab.* p. 159.

Urtica heterophylla, *Vahl, Symb.* i. p. 76; *Wight, Icon.* t. 687.

HUPEH: Ichang (*A. Henry*, 926!); YUNNAN: Mengtze (*A. Henry*, 9065!). Herb. Kew.

India, Java, and Tropical Africa.

"The leaves cause soreness and itching of the hands for a day" (*Dr. A. Henry*).

1. **Pilea anisophylla,** *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 193?

FORMOSA: Bankinsing mountains (*A. Henry*, 1634!); YUNNAN: Mengtze (*A. Henry*, 11287! *Hancock*, 416!). Herb. Kew.

This is distinguishable from typical *P. anisophylla*, Wedd., only by its monœcious inflorescence. The Formosan plant has more pronounced denticulations on the leaves.

2. **Pilea bracteosa,** *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 245; *DC. Prod.* xvi. 1, p. 134; *Hance in Journ. Bot.* 1883, p. 356; *Hook. f. Fl. Brit. Ind.* v. p. 555.

FORMOSA: Tamsui (*Watters* ex *Hance*).

Northern India.

3. **Pilea crassifolia,** *Hance in Journ. Bot.* 1882, p. 294, non *Blume.*

KWANGTUNG: River Lienchau, near Canton (*B. C. Henry* in herb. *Hance,* 21712!). Mus. Brit.

4. **Pilea Hookeriana,** *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 226; *DC. Prod.* xvi. 1, p. 128; *Hook. f. Fl. Brit. Ind.* v. p. 557.

YUNNAN: Mengtze (*A. Henry,* 11339!). Herb. Kew.
Northern India.

5. **Pilea mongolica,** *Wedd. in DC. Prod.* xvi. 1, p. 135; *Franch. Pl. David.* i. p. 271.

CHIHLI: Jehol (*David,* 2043, ex *Weddell*).

6. **Pilea muscosa,** *Lindl. Collect. Bot.* t. 4 (1821); *Hance in Journ. Bot.* 1887, p. 13.

Pilea microphylla, *Liebm. in Vidensk. Selsk. Skr.* v. ii. p. 302 (1851); *DC. Prodr.* xvi. 1, p. 105.

Parietaria microphylla, *Linn. Syst.* ed. x. p. 1308; *Sp. Pl.* ed. ii. p. 1492.

Urtica microphylla, *Swartz, Fl. Ind. Occ.* i. p. 305.

KWANGTUNG: Macao (*Hance*); HONGKONG (*Hance*).

Widely dispersed through Tropical America; naturalized in the above-mentioned localities.

✓ 7. **Pilea notata,** *C. H. Wright,* n. sp.

Caulis glaber, 1–2-pedalis. *Folia* ovato-lanceolata, acuminata, basi obtusa, 3-nervia, serrata, utrinque cystolithis conspicuis oblongis instructa, 3–3½ poll. longa, 1¼–1½ poll. lata; petiolus tenuis, 1–1½ poll. longus; stipulæ deciduæ. *Cymæ* masculæ laxæ, petiolis æquilongæ. *Perianthii* segmenta 4, ovata, mucronata, apice leviter inflexa. *Stamina* 4; filamenta perianthii segmentis longiora. *Ovarii* rudimentum minutum. Planta feminea non visa.

CHEKIANG: Ningpo mountains (*Faber,* 1749!); KIANGSI: Kiukiang, Lushan mountains (*Bullock,* 81! *Shearer*!); HUPEH: Ichang (*A. Henry,* 2706, 2233, 4229!), Nanto (*A. Henry,* 2592!), S. Patung (*A. Henry,* 7288!); SZECHUEN: Mount Omei, 4000 ft. (*Faber,* 434!). Mus. Brit.; Herb. Kew.

8. **Pilea oxyodon**, *Wedd.?* *in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 221; *DC. Prod.* xvi. 1, p. 126; *Hook. f. Fl. Brit. Ind.* v. p. 555.

Hupeh: Chienshih (*A. Henry*, 5826 !). Mus. Brit.; Herb. Kew.

Temperate Himalayas.

9. **Pilea peltata**, *Hance in Ann. Sc. Nat.* 5$^{\text{me}}$ sér. v. p. 242; *Journ. Bot.* 1882, p. 294; *DC. Prod.* xvi. 1, p. 131; *Maxim. in Mel. Biol.* ix. p. 630.

Kwangtung: Kaikunshek near Canton (*Sampson*, in herb. *Hance*, 11409 !). Mus. Brit.; Herb. Kew.

10. **Pilea peploides**, *Hook. et Arn. Bot. Beechey's Voy.* p. 96; *Hance in Journ. Bot.* 1874, p. 262; *Franch. et Savat. Enum. Pl. Jap.* i. p. 438; *Miq. in Ann. Mus. Lugd.-Bat.* iii. p. 130; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 179; *DC. Prod.* xvi. 1, p. 109; *Maxim. in Mél. Biol.* ix. p. 630.

Dubreuilia peploides, *Gaud. in Freycin. Voy., Bot.* p. 495.

Formosa (*Oldham*, 516 !); Corean Archipelago (*Oldham*, 765 !); Luchu Archipelago (*Wright*, 302 !). Mus. Brit.; Herb. Kew.

Mandshuria, Japan, and Pacific Islands.

11. **Pilea plataniflora**, *C. H. Wright*, n. sp.

Caulis glaber, 1¼ ped. altus. *Folia* late lanceolata, longe acuminata, integerrima, supra cystolithis oblongis instructa, 3 poll. longa, 1 poll. lata; petiolus 6 lin. longus; stipulæ deciduæ. *Florum* glomeruli racemose dispositi; rhachis foliis paullo brevior. *Perianthii* segmenta 4, ovata, apice incurva, membranacea, arcte 1-nervata. *Filamenta* perianthii segmentis paullo breviora. *Ovarii* rudimentum 0 vel minutissimum.

Yunnan: Mengtze (*Hancock*, 52 ! *A. Henry*, 9781 ! 9781 A !). Herb. Kew.

12. **Pilea pumila**, *A. Gray, Man. Bot. U.S.* ed. I. p. 437; *DC. Prod.* xvi. 1, p. 159; *Maxim. in Mél. Biol.* ix. p. 631; *Hance in Journ. Linn. Soc., Bot.* xiii. p. 86; *Journ. Bot.* 1874, p. 262.

Pilea mongolica, *Wedd. in DC. Prodr.* xvi. 1, p. 135; *Franch. Pl. David.* i. p. 271.

Pilea petiolaris, *Franch. & Savat. Enum.* i. p. 438, non *Blume.*
Urtica pumila, *Linn. Sp. Pl.* p. 984.
Adike pumila, *Rafin. New Fl. Amer.* i. p. 63.
Acalypha brachystachya, *Maxim. Fl. Pek. in Prim. Fl. Amur.* p. 477.

CHIHLI: Jehol (*David*, 2043, ex *Franchet*), Peking (*Bretschneider*, 11! *Bullock*, 85!); SHINGKING (*Ross*, 134!). Mus. Brit.; Herb. Kew.

North America, Japan, and Mandshuria.

13. **Pilea rubriflora**, *C. H. Wright*, n. sp.

Caulis ramosus, glaber, prope basin 3 lin. diam., supra internodis brevibus. *Folia* oblonga, acuta vel acuminata, 3-nervia, serrata, cystolithis numerosissimis linearibus, 3 poll. longa, 1¼ poll. lata; petiolus 6 lin. longus; stipulæ deciduæ. *Glomeruli* florum ad axillas foliorum sessiles. *Perianthii* segmenta 4, oblonga, apice incurva, rubescentes, staminibus paullo longiora. *Ovarii* rudimentum minutum. Planta feminea non visa.

HUPEH: Ichang (*A. Henry*, 3333!). Mus. Brit.; Herb. Kew.

14. **Pilea scripta**, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 222; *Ann. Sc. Nat.* 4me sér. i. p. 187; *DC. Prod.* xvi. 1, p. 127; *Blume, Mus. Bot.* ii. p. 57; *Hook. f. Fl. Brit. Ind.* v. p. 556.

Pilea Goglado, *Wedd. in Ann. Sc. Nat.* 4me sér. i. p. 188.
Urtica scripta, *Ham. in Don, Prod. Nep.* p. 59.
Urtica Hamiltoniana, *Wall. Cat.* n. 4590.

YUNNAN: Mengtze (*A. Henry*, 10414, 11393!). Herb. Kew.

Northern India.

15. **Pilea stipulosa**, *Miq. in Zoll. Syst. Verzeichn. Ind. Arch.* p. 102; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 230; *Hook. f. Fl. Brit. Ind.* v. p. 555.

Pilea angulata, *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 55; *DC. Prod.* xvi. 1, p. 131; *Maxim. in Mél. Biol.* ix. p. 631.
Urtica angulata, *Blume, Bijdr.* p. 494.
Urtica stipulosa, *Miq. Pl. Jungh.* p. 28.
Pilea petiolaris, *Wedd. in Ann. Sc. Nat.* 4me sér. i. p. 186, non *Blume.*

HUPEH (*A Henry*, 5352!); YUNNAN: Mengtze (*A. Henry*,

10295, 11294, 11344!); LUCHU ARCHIPELAGO (*Wright*, 298!). Herb. Kew.

Northern India, Ceylon, and Java.

The volume of the *Mus. Bot. Lugd.-Bat.* in which Blume published *Pilea angulata* is dated 1852; but a note by Bentham in the copy at Kew states that it was not published until 1856, therefore Miquel's name, published in 1854, has priority.

16. **Pilea Symmeria**, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 246; *DC. Prod.* xvi. 1, p. 134; *Hook. f. Fl. Brit. Ind.* v. p. 554.

HUPEH: Patung (*A. Henry*, 1815, 4043, 4752, 4989, 7340!), Kuei (*A. Henry*, 6178!); SZECHUEN: Mount Omei (*Faber*, 435!); YUNNAN: Mengtze (*Hancock*, 357!), mountains S.W. of Mengtze (*A. Henry*, 9790!), Mile (*A. Henry*, 10453!). Mus. Brit.; Herb. Kew.

Temperate Himalaya and Khasia mountains.

17. **Pilea umbrosa**, *Wedd. in Ann. Sc. Nat.* 4^{me} sér. i. (1854) p. 187; *Arch. Mus. Hist. Nat. Par.* ix. p. 243; *DC. Prod.* xvi. 1, p. 133; *Hook. f. Fl. Brit. Ind.* v. p. 556.

Urtica umbrosa, *Wall. Cat.* n. 4589.

SZECHUEN: near Tachienlu (*Pratt*, 110, 142!); YUNNAN: Mengtze (*Hancock*, 459!), Fengchenlin peak, 7000 feet (*A. Henry*, 10896!). Mus. Brit.; Herb. Kew.

Temperate Himalaya and Khasia mountains.

A plant collected in Yunnan by Dr. A. Henry (no. 11230) is intermediate between this and *P. Wightii*, Wedd. (Ann. Sc. Nat. 4^{me} sér. i. p. 186). Some of the forms of these two species are separable with difficulty, as stated by Sir J. D. Hooker in Flor. Brit. Ind. v. p. 554.

18. **Pilea Wattersii**, *Hance in Journ. Bot.* 1885, p. 327.

FORMOSA: near Tamsui (*Watters* in hb. *Hance* 22296!). Mus. Brit.; Herb. Kew.

19. **Pilea**, sp.

HUPEH: Ichang (*A. Henry*, 2046, 4352, 4352 A, 4352 B, 4352 C!). Herb. Kew.

The material of this distinct species is too imperfect for drawing up a satisfactory description. The leaves are ovate, long acuminate, 3-nerved nearly to the apex, and quite entire.

20. **Pilea**, sp.

Chekiang: Ningpo mountains (*Faber*, 312!); Hupeh: South Patung (*A. Henry*, 7295!). Herb. Kew.

Allied to *P. peltata*, Hance, but differing in the basal insertion of the petiole. The specimens are in fruit only.

1. **Achudemia japonica**, *Maxim. in Bull. Acad. Pétersb.* xxii. p. 241; *Mél. Biol.* ix. p. 627.

Hupeh: Ichang (*A. Henry*, 2896!), Nanto (*A. Henry*, 4461!); Hainan (*A. Henry*, 8745!). Herb. Kew.

Japan.

1. **Lecanthus Wallichii**, *Wedd. in Ann. Sc. Nat.* 4^{me} sér. i. p. 187.

Lecanthus major, *Wedd. l. c.*?
Lecanthus Wightii, *Hook. f. in Fl. Brit. Ind.* v. p. 559, ex parte.
Lecanthus peduncularis, *Wedd. in DC. Prodr.* xvi. 1, p. 164, ex parte.
Procris peduncularis, *Wall. Cat.* n. 4634; *Royle, Illustr.* t. 83. fig. 2.

Szechuen: Mount Omei, 8000 feet (*Faber*, 432!); Yunnan: Mengtze (*A. Henry*, 9738, 9738 A!). Herb. Kew.

Northern India.

This species has sometimes been united with *L. Wightii*, Wedd., from which it can be diagnosed thus:—

L. Wightii.—A low, weak herb. Female perianth of three very unequal segments.

L. Wallichii.—A more robust herb. Female perianth of four subequal segments.

2. **Lecanthus Wightii**, *Wedd. in Ann. Sc. Nat.* 4^{me} sér. i. p. 187; *Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 280, t. 9. fig. C; *Hook. f. Fl. Brit. Ind.* v. p. 559, ex parte.

Lecanthus peduncularis, *Wedd. in DC. Prodr.* xvi. 1, p. 164, ex parte.
Elatostema ovatum, *Wight, Ic.* t. 1985?
Elatostema oppositifolium, *Dalz. in Kew Journ. Bot.* iii. (1851) p. 179.
Procris obtusa, *Royle, Illustr.* t. 83. fig. 3.

Yunnan: Mengtze (*A. Henry*, 9031!); Kwangtung: Lofau mountains (*Ford*, 108, 326!). Herb. Kew.

India, from the Himalayas to Ceylon, Java, Tropical Africa.

1. **Pellionia ambigua**, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 285; *Hook. f. Fl. Brit. Ind.* v. p. 560.

SZECHUEN: Mount Omei, 9000 feet (*Faber*, 433!). Herb. Kew.
Khasia mountains in the tropical region.

2. **Pellionia brevifolia**, *Benth. Fl. Hongk.* p. 330; *DC. Prodr.* xvi. 1, p. 167; *Maxim. in Mél. Biol.* ix. p. 632.

HONGKONG: ravines on Mounts Gough and Victoria (*Wilford*, 227!). Mus. Brit.; Herb. Kew.

3. **Pellionia Griffithiana**, *Wedd. in DC. Prodr.* xvi. 1, p. 165; *Hook. f. Fl. Brit. Ind.* v. p. 559.

YUNNAN: Mengtze (*A. Henry*, 9163, 9163 B, 9163 C, 9163 D!). Herb. Kew.

Upper Assam.

4. **Pellionia Grijsii**, *Hance in Journ. Bot.* 1868, p. 49, et 1874, p. 262; *Maxim. in Mél. Biol.* ix. p. 632.

FOKIEN (*De Grijs* in hb. *Hance*, 6704!). Mus. Brit.

5. **Pellionia radicans**, *Wedd. in DC. Prodr.* xvi. 1, p. 167?

FORMOSA: Tamsui (*Oldham*, 518!); KWANGTUNG: West River, Canton (*Lamont* in hb. *Hance*, 10653!). Mus. Brit.; Herb. Kew.

6. **Pellionia scabra**, *Benth. Fl. Hongk.* p. 330; *Wedd. in DC. Prodr.* xvi. 1, p. 166; *Maxim. in Mél. Biol.* ix. p. 633.

CHEKIANG: Hangchow (*Hicken*!); KIANGSI: Lushan (*Bullock*, 226!); FORMOSA: Tamsui (*Oldham*, 518, ex *Maximowicz*); YUNNAN: Mengtze (*A. Henry*, 10958! *Hancock*, 254!); KWANGTUNG: Canton (*B. C. Henry*!); HONGKONG (*Wilford*, 226! *Wright*, 447! *Harland*, 326=*Hance*, 1095!). Mus. Brit.; Herb. Kew.

Japan.

√ 7. **Pellionia viridis**, *C. H. Wright*, n. sp.

Caulis glaber, basi lignosus. *Folia* oblonga, longe acuminata, subæqualia, dentata, supra cystolithis elongatis vestita, basi obtusa, 3–4 poll. longa, 1–1¼ poll. lata; petiolus 3–6 lin. longus; stipulæ subulatæ. *Pedunculus* ¼–1 in. longus, floribus capitatis. Masculi *perianthii* lobi 4, cucullati, dorso infra apicem longe mucronati. Planta feminea non visa.

HUPEH: Ichang (*A. Henry*, 4098!); SZECHUEN: Mount Omei, 2500–3000 feet (*Faber*, 439, 440!). Mus. Brit.; Herb. Kew.

Nearest to *P. ambigua*, Wedd., which differs in having sessile leaves with a semicordate base.

[*Polychroa repens*, Lour. Fl. Coch. p. 559, is perhaps a species of *Pellionia*. It is said by Loureiro to be cultivated in China and Cochinchina on account of the beauty of its many-coloured leaves.]

1. **Elatostema ficoides**, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 306, t. 10; *DC. Prodr.* xvi. 1, p. 171; *Hook. f. Fl. Brit. Ind.* v. p. 563.

Elatostema Mariannæ, *C. B. Clarke in Journ. Linn. Soc., Bot.* xv. p. 124.

Procris ficoidea, *Wall. Cat.* n. 4635.

FORMOSA: Bankinsing mountains (*A. Henry*, 1617!); YUNNAN: Mengtze (*Hancock*, 415!). Herb. Kew.

Northern India.

Dr. A. Henry's 4169 from Ichang may be a form of this species.

2. **Elatostema involucratum**, *Franch. et Sav. Enum. Pl. Jap.* i. p. 439, et ii. p. 495; *Franch. Pl. David.* i. p. 271; *So Mokou Zoussetz*, xx. t. 15.

Elatostema umbellatum, var. majus, *Maxim. in Mél. Biol.* ix. p. 637.

KIANGSI: Kiukiang (*David*, 879, 752, ex *Franchet*).

Japan.

3. **Elatostema lineolatum**, var. **major**, *Thw. Enum. Pl. Zeyl.* p. 260; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 312; *DC. Prodr.* xvi. 1, p. 182; *Hook. f. Fl. Brit. Ind.* v. p. 562.

FOKIEN (*De Grijs* in hb. *Hance* 6703!); FORMOSA: Bankinsing (*A. Henry*, 53! 53 A!); HUPEH: Ichang (*A. Henry*, 2303, 2731!). Mus. Brit.; Herb. Kew.

Ceylon and Southern India.

It is extremely difficult to separate some of the forms of this polymorphic species from *E. sessile*, Forst.

4. **Elatostema platyphyllum**, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 301; *DC. Prodr.* xvi. 1, p. 175; *Hook. f. Fl. Brit. Ind.* v. p. 566.

FORMOSA: Bankinsing (*A. Henry*, 154!). Herb. Kew.

Tropical Himalaya, Khasia mountains, and Naga hills.

5. **Elatostema sessile,** *J. et G. Forster, Char. Gen.* p. 106; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 294; *DC. Prodr.* xvi. 1, p 172; *Hook. f. Fl. Brit. Ind.* v. p. 563.

Elatostema pubescens, *Pers. Syn.* ii. p. 557.
Procris sessilis, *Hook. et Arn. Bot. Beech. Voy.* p. 70.
Procris australis, *Spreng. Syst.* iii. p. 846.
Dorstenia pubescens, *G. Forst. Fl. Ins. Austr. Prodr.* p. 11.

HUPEH: Ichang (*A. Henry*, 2235, 2928, 3266!), Nanto and mountains to northward (*A. Henry*, 2593, 3266 A!), Patung (*A. Henry*, 1791!); YUNNAN: Fengchenlin (*A. Henry*, 11229!). Herb. Kew.

Extending through Japan and Malaya to the Pacific Islands.

This species varies much in the texture and serration of the leaves.

6. **Elatostema umbellatum,** *Blume, Mus. Bot. Lugd.-Bat.* ii. t. 19; *Franch. et Savat. Enum. Pl. Jap.* i. p. 438, et ii. p. 493; *Maxim. in Mél. Biol.* ix. p. 636 (excl. var. majus).

Elatostema japonicum, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 315; *Miq. in Ann. Mus. Lugd.-Bat.* iii. p. 132.
Procris umbellata, *Sieb. et Zucc. in Abh. Akad. Muench.* iv. 3, p. 217.
Pellionia umbellata, *Wedd. in DC. Prodr.* xvi. 1, p. 167.

HUPEH: Patung (*A. Henry*, 4766!), Nanto (*A. Henry*, 6388!); SZECHUEN: Mount Omei, 3000 feet (*Faber*, 442!); YUNNAN: Mengtze (*A. Henry*, 10501!). Herb. Kew.

Japan.

The serrations of the leaves of the specimens from Nanto and Mount Omei are more numerous and more acute than those from Patung.

7. **Elatostema,** sp. nov.?, aff. E. Hookeriano, *Wedd.*, *Hance in Journ. Bot.* 1874, p. 261; *Maxim. in Mél. Biol.* ix. p. 637.

KIANGSI: Kiukiang (*Moellendorff* ex *Hance*).

8. **Elatostema,** sp. nov.?, *Hance in Journ. Bot.* 1883, p. 356.

KWANGTUNG: Yeungtin, near the river Lienchau (*B. C. Henry* ex *Hance*).

"Very close to *E. surculosum*, Wight, and perhaps only a variety, but the upper leaves are broader, more oblique, and quite destitute of the long acumen of that plant."—*Hance.*

9. **Elatostema**, sp.

Hupeh: Chienshih (*A. Henry*, 5984!). Mus. Brit.; Herb. Kew.

This species, which is only known in fruit, much resembles *Pellionia radicans*, Wedd., from which it differs in the leaves bearing scattered hairs and no cystoliths.

1. **Procris lævigata**, *Blume, Bijdr.* p. 508; *Miq. Fl. Ind. Bat.* i. 2, p. 248; *Wedd. in DC. Prodr.* xvi. 1, p. 192; *Hook. f. Fl. Brit. Ind.* v. p. 575.

Procris Wightiana, *Wall. Cat.* n. 4638; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 336.

Elatostema lævigatum, *Hassk. Cat. Hort. Bogor.* 1844, p. 79.

Elatostema Wightianum, *Wedd. in Ann. Sc. Nat.* 4me sér. i. p. 188.

Formosa: South Cape (*A. Henry*, 1245!), Bankinsing (*A. Henry*, 1590!); Yunnan: Mengtze (*A. Henry*, 11314!); Kwangtung: mainland opposite Hongkong (*Ford*, 558!). Herb. Kew.

Throughout India, and extending from Java to the Comoro Islands and Fernando Po.

1. **Boehmeria densiflora**, *Hook. et Arn. Bot. Beech. Voy.* p. 271; *Wedd. in DC. Prodr.* xvi. 1, p. 215; et *in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 373; *Maxim. in Mél. Biol.* ix. p. 646.

Boehmeria platyphylla, var. loochooensis, *Wedd. in DC. Prodr.* xvi. 1, p. 213.

Boehmeria Weddeliana, *Vidal, Rev. Pl. Vasc. Filip.* p. 256.

Chekiang (*Staunton* ex *Weddell*); Formosa (*Oldham*, 519, 520 ex parte! *Hance*, 393! *Swinhoe*!), Keelung (*Wilford*, 515, 516! *Ford*, 33, 34!), Bankinsing (*A. Henry*, 184, 468!), Ape's Hill (*Playfair*, 243, 451! *A. Henry*, 468 E!); Hongkong: Victoria Peak (*Bodinier*, 560!); Luchu Archipelago (*Wright*, 303!). Mus. Brit.; Herb. Kew.

Philippine Islands.

Dr. A. Henry's n. 184 is intermediate between this species and *B. macrophylla*, D. Don.

2. **Boehmeria diffusa**, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 356.

Boehmeria comosa, *Wedd. in DC. Prodr.* xvi. 1, p. 205.

Boehmeria sidæfolia, *Hook. f. Fl. Brit. Ind.* v. p. 576, partly.

HUPEH: Ichang (*A. Henry*, 2924, 4274!), Nanto (*A. Henry*, 3215!); YUNNAN: Mengtze (*A. Henry*, 10736!). Herb. Kew.
India.

Boehmeria sidæfolia, Wedd. in Ann. Sci. Nat. 4^{me} sér. i. p. 203, is an opposite-leaved form of this species. I have seen no Chinese specimens of it.

3. **Boehmeria gracilis**, *C. H. Wright*, n. sp.

Herba vel suffrutex ramis gracilibus glabra. *Folia* opposita, ovata, acuminata, basi rotundata rarius acuta, serrata, supra sparse pilosa, subtus ad nervos hirsuta, 2 poll. longa, 1–1½ poll. lata; petiolus ad ¾ poll. longus; stipulæ subulatæ, 3–4 lin. longæ. *Spicæ* 1–2, axillares, foliis æquilongæ; glomeruli distincti, parvi.
HUPEH: Patung (*A. Henry*, 4692, 4728!), Changlo (*A. Henry*, 6258!). Herb. Kew.

This somewhat resembles a common Japanese form of *B. spicata*, but differs in having ovate regularly serrate leaves.

4. **Boehmeria grandifolia**, *Wedd. in Ann. Sc. Nat.* 4^{me} sér. i. p. 199.

Boehmeria macrophylla, *Sieb. & Zucc. in Abh. Akad. Muench.* iv. 3, (1846) p. 215, non *D. Don*.

Boehmeria platyphylla, var. macrophylla, *Wedd. in DC. Prod.* xvi. 1, p. 213, *excl. syn.* B. longispica, *Steud.*

Boehmeria longispica, *Franch. et Savat. Enum. Pl. Jap.* i. p. 440 ex parte, non *Steud.*

Urtica macrophylla, *Thunb. Fl. Jap.* p. 69.

YUNNAN: Mengtze (*Hancock*, 375! *A. Henry*, 9792 E!); KWANGTUNG (*Ford*, 173!). Herb. Kew.
Japan.

5. **Boehmeria macrophylla**, *D. Don, Prod. Fl. Nep.* p. 60, non *Sieb. & Zucc.*; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 375, t. xi. figs. 1–9; *DC. Prod.* xvi. 1, p. 209; *Hook. f. Fl. Brit. Ind.* v. p. 577.

Boehmeria penduliflora, *Wedd. in Ann. Sc. Nat.* 4^{me} sér. i. p. 199.

Urtica penduliflora, *Wall. Cat.* 4595 A.

Urtica angustifolia, *Ham.*, et U. macrostachya, *Wall.*, ex *D. Don, Prod. Fl. Nep.* p. 60.

B

YUNNAN: Mengtze (*A. Henry*, 9063, 9063 A–C!). Herb. Kew.

Himalayan region, Burma, and Mauritius.

This may be an extreme form of *B. densiflora*, Hook. & Arn.

6. **Boehmeria nivea**, *Gaud. in Freycin. Voy., Bot.* p. 499; *Benth. Fl. Hongk.* p. 331; *Hook. et Arn. Bot. Beechey's Voy.* p. 214; *Hook. Kew Gard. Misc.* iii. p. 315, t. 8; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 380, t. xi. figg. 10–17; *DC. Prod.* xvi. 1, p. 206; *Debeaux, Fl. Shanghai*, p. 55; *Maxim. in Mél. Biol.* ix. p. 639; *Henriques in Bol. Soc. Brot.* iii. p. 142; *A. Henry in Rep. Chin. Imp. Marit. Customs, 2nd special series*, no. 16, p. 6; *Watt, Dict. Econ. Prod. Ind.* i. p. 468; *Hook. f. Fl. Brit. Ind.* v. p. 985; *Kew Bulletin*, 1888, pp. 145, 273, 297, 1889, pp. 268, 284, 1891, p. 277, 1896, p. 73, 1898, p. 209.

Boehmeria tenacissima, *Gaud. in Freycin. Voy., Bot.* p. 500.

Boehmeria nivea, var. tenacissima, *Kew Bulletin*, 1888, p. 145.

Urtica tenacissima, *Roxb. Hort. Beng.* p. 67, et *Fl. Ind.* iii. p. 590.

Urtica utilis, *Hort. ex Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 380.

China: *Millett*!; Kiangsu: Shanghai (ex *Debeaux*); Fokien: Amoy (*Swinhoe*!); Formosa (*Oldham*, 522!), Ape's Hill (*Playfair*, 251!), Bankinsing (*A. Henry*, 483!); Hupeh: Ichang (*A. Henry*, 15, 2159, 4878!); Shensi (*Piasezki* ex *Maximowicz*); Yunnan: Mengtze (*A. Henry*, 11247!); Kwangtung: Macao (*Gomes da Silva* ex *Henriques*); Hongkong (*Eyre*, 255! *Urquhart*, 118!). Herb. Kew.

Japan and Malayan Islands. Widely cultivated in India for its fibre, from which Chinese Grass-cloth is made. Variously known as Rhea, China-Grass, Ramie, Ch'uma, Tchouma, &c.

Var. **crassifolia**, *C. H. Wright*, n. var.

Rami pilosi. Folia ovato-lanceolata, acutissima, crenata, supra rugosa, hispida.

Yunnan: Mengtze (*Hancock*, 238!). Herb. Kew.

7. **Boehmeria platanifolia**, *Franch. et Savat. Enum. Pl. Jap.* i. p. 449; *Franch. Pl. David.* i. p. 270.

Boehmeria japonica, var. platanifolia, *Maxim. in Mél. Biol.* ix. p. 643.

Kiangsi: Kiukiang, Lushan (*Bullock*! *Shearer* ex *Maximowicz*); Hupeh: S. Patung (*A. Henry*, 6150!), Nanto (*A. Henry*, 2049!); Szechuen: North Wushan (*A. Henry*, 7033!). Herb. Kew.

Japan.

8. **Boehmeria platyphylla**, *D. Don, Prod. Fl. Nep.* p. 60, var. **clidemioides**, *Wedd. in DC. Prod.* xvi. 1, p. 212.

Boehmeria clidemioides, *Miq. Pl. Jungh.* i. p. 34; *Flor. Ned. Ind.* i. 2, p. 252.

Boehmeria pilosiuscula, *Hassk. Cat. Hort. Bogor.* p. 79; *Blume, Mus. Lugd.-Bat.* ii. p. 223.

Urtica pilosiuscula, *Blume, Bijdr.* p. 491.

FORMOSA: Bankinsing (*A. Henry*, 33!); HAINAN (*B. C. Henry*, 51!). Herb. Kew.

Java.

Var. **macrostachya**, *Wedd. in DC. Prod.* xvi. 1, p. 211?

YUNNAN: Mengtze (*A. Henry*, 9792, 9792 A-B!). Herb. Kew.

Var. **scabrella**, *Wedd. in DC. Prod.* xvi. 1, p. 211; *Maxim. in Mél. Biol.* ix. p. 641; *Hance in Journ. Bot.* 1874, p. 262; *Hook. f. Fl. Brit. Ind.* v. p. 578.

Boehmeria scabrella, *Gaud. Freycin. Voy., Bot.* p. 500; *Miq. Fl. Ned. Ind.* i. 2, p. 253.

Boehmeria ourantha, *Miq. Pl. Jungh.* i. p. 33; *Bl. Mus. Bot. Lugd.-Bat.* ii. p. 221 (urantha).

Urtica caudata, *Burm. Fl. Ind.* p. 198 (298); *Bl. Bijdr.* p. 492, non *Poir.* nec *Vahl.*

Urtica scabrella, *Roxb. Hort. Beng.* p. 67; *Fl. Ind., ed. Carey*, iii. p. 581; *Wall. Cat.* n. 4581; *Wight, Icon.* t. 691.

Urtica uragera, *Steud. Nomencl.* ed. 2, ii. p. 736.

KWANGTUNG: North River, Canton (*Sampson & Hance*, 10299!). Mus. Brit.; Herb. Kew.

Northern India.

Var. **stricta**, *C. H. Wright*, n. var.

Caulis sublignosus. *Folia* ovato-lanceolata, 4 poll. longa, 1¾ poll. lata, basi subacuta, apice acuminata, marginibus crenato-dentatis, supra fere glabra, subtus ad nervos hirsuta; petiolus 1-1½ poll. longus. *Spica* solitaris, interrupte glomerata.

CHEKIANG (*Staunton*); FORMOSA (*Oldham*, 521!), West Coast (*Wilford*, 547!), Bankinsing (*A. Henry*, 187!), South Cape (*A. Henry*, 1293!); KWANGTUNG: Lofaushan (*Ford*, 107!). Mus. Brit.; Herb. Kew.

Plants collected by the Rev. E. Faber at Ningpo and by Dr. A. Henry at Nanto differ from this variety only in the more sharply serrate margins of the leaves.

9. **Boehmeria polystachya,** *Wedd. in Ann. Sc. Nat.* 4me sér. i. p. 200; *Arch. Mus. Hist. Nat. Par.* ix. p. 370; *DC. Prod.* xvi. 1, p. 215; *C. B. Clarke in Journ. Linn. Soc., Bot.* xv. p. 125; *Hook. f. Fl. Brit. Ind.* v. p. 579.

Urtica polystachya, *Wall. Cat.* n. 4584.

YUNNAN: Mengtze (*Hancock*, 462 !). Herb. Kew.

Temperate Himalaya and Khasia mountains.

A plant collected by Ford in Kwangtung is probably a variety of this species, differing in the leaves having numerous minute appressed hairs on both surfaces and more acute serrations.

10. **Boehmeria spicata,** *Thunb. in Trans. Linn. Soc.* ii. p. 330; *Miq. in Ann. Mus. Lugd.-Bat.* iii. p. 131 partim; *Franch. et Savat. Enum. Pl. Jap.* i. p. 440; *Maxim. in Mél. Biol.* ix. p. 645.

Acalypha sp., *Houtt. Handl.* xi. 291, t. 72. fig. 2.

Urtica spicata, *Thunb. Fl. Jap.* p. 69.

Boehmeria longispica, *Steud. in Flora,* 1850, p. 260; *Franch. et Savat. Enum. Pl. Jap.* i. p. 440, ex parte.

Boehmeria sp., *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477.

Boehmeria platyphylla, var. japonica, *Wedd. in DC. Prod.* xvi. 1, p. 213, partim.

Boehmeria japonica, var. tricuspis, *Hance in Journ. Bot.* 1874, p. 261; *Maxim. in Mél. Biol.* ix. p. 642.

CHIHLI: Peking (*Bretschneider*, 684 !); KIANGSI: Kiukiang (*Hance*, 18053 !); FOKIEN: Amoy (*Fortune*, 85 !); HUPEH: Patung (*A. Henry*, 1808, 4958 !); SZECHUEN: Mount Omei (*Faber*, 431, 437 !); COREA: Seoul Mountains (*Carles*, 159 !). Mus. Brit.; Herb. Kew.

Japan.

✓ Var. **duploserrata,** *C. H. Wright*, n. var.: *B. longispicæ*, Steud., similis, sed foliis duplo-serratis recedit.

CHEKIANG ? (*H. J. Hicken* !). Herb. Kew.

11. **Boehmeria Zollingeriana,** *Wedd. in Ann. Sc. Nat.* 4me sér. i. p. 201; *DC. Prod.* xvi. 1, p. 208.

Boehmeria diversiflora, *Miq. in Zolling. Syst. Verzeichn.* p. 101.

FORMOSA (*Oldham*, 520 ! ex parte), Keelung (*Wilford*, 516 ! *Ford*, 33 !), Ape's Hill (*Playfair*, 451 !), Bankinsing (*A. Henry*, 468, 468 E !). Mus. Brit.; Herb. Kew.

Java.

I have not seen Zollinger's no. 2765, upon which Weddell founded this species, but have relied upon the latter's description, which seems to me to exactly fit the present plant.

1. **Chamabainia cuspidata**, *Wight, Icon.* t. 1981; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 387, t. xii. fig. B; *Hook. f. Fl. Brit. Ind.* v. p. 580.

Chamabainia squamigera, *Wedd. in DC. Prod.* xvi. 1, p. 218.

Boehmeria squamigera, *Wedd. in Ann. Sc. Nat.* 4me sér. i. p. 203.

Urtica squamigera, *Wall. Cat.* n. 4592.

Szechuen: Mount Omei (*Faber*, 438!); Yunnan: Mengtze (*A. Henry*, 10208!). Herb. Kew.

Northern India to Ceylon.

1. **Pouzolzia elegans**, *Wedd. in DC. Prod.* xvi. 1, p. 230; *Maxim. in Mél. Biol.* ix. p. 647.

Formosa (*Wilford*, 552!), Bankinsing (*A. Henry*, 177!); Yunnan: Mengtze (*Hancock*, 326!). Herb. Kew.

"Pounded bark used by savages as an application to boils."—*A. Henry*.

2. **Pouzolzia hirta**, *Hassk. Cat. Hort. Bogor. Alt.* p. 80; *Hook. f. Fl. Brit. Ind.* v. p. 586.

Pouzolzia hispida, *Benn. Pl. Jav. Rar.* p. 66; *Benth. in Hook. Kew Journ. Bot.* 1854, p. 23.

Urtica hirta, *Blume, Bijdr.* p. 495.

Memorialis hispida, *Buch.-Ham. in Wall. Cat.* sub n. 4601; *Benth. Fl. Hongk.* p. 332.

Memorialis hirta, *Wedd. in DC. Prod.* xvi. 1, p. 235^6 partly; *Maxim. in Mél. Biol.* ix. p. 648; *Franch. et Savat. Enum. Pl. Jap.* i. p. 441; *Franch. Pl. David.* i. p. 271.

Memorialis quinquenervis, *Buch.-Ham. in Wall. Cat.* n. 4601; *Wedd. in DC. Prod.* xvi. 1, p. 235^8.

Hyrtanandra hirta, *Miq. Pl. Jungh.* p. 26; *Fl. Ind. Bat.* i. 2, p. 261.

Kiangsi: Kiukiang (*Bullock*, 79! *David*, 868, ex *Franchet*); Fokien: Foochow (*Carles*, 732, 784!); Formosa: Tamsui (*Oldham*, 523!), Bankinsing (*A. Henry*, 437!); Hupeh: Ichang (*A. Henry*, 467, 1682, 3637!), Nanto (*A. Henry*, 1905!); Yunnan: Mengtze (*A. Henry*, 10727!); Kwangtung: Lofaushan (*Ford*!); Hongkong (*Wright*, 448! *Lamont*, 716! *Forbes*!); Luchu Archipelago (*Wright*, 297! *Carpenter*, 9!); Szechuen: Min River (*Faber*!), Chungching (*F. S. A. Bourne*!). Mus. Brit.; Herb. Kew.

Extending from India through Malaya to Australia.

3. **Pouzolzia hypericifolia**, *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 241.

Memorialis pentandra, var. hypericifolia, *Wedd. in DC. Prod.* xvi. 1, p. 235³; *Maxim. in Mél. Biol.* ix. p. 647.

SOUTH CHINA (ex *Weddell*); HAINAN (*A. Henry*, 8119 !). Herb. Kew.

4. **Pouzolzia indica**, *Gaud. Bot. Voy. Uran.* p. 503.

Subvar. **procumbens**, *Wedd. in DC. Prod.* xvi. 1, p. 220; *Benth. Fl. Hongk.* p. 331; *Maxim. in Mél. Biol.* ix. p. 647.

Pouzolzia procumbens, *Wight, Icon.* t. 2099. fig. 35; *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 231.

HONGKONG (*Wright* !), Mount Victoria (*Lamont*, 715 !). Mus. Brit.; Herb. Kew.

Var. **alienata**, *Wedd. in DC. Prod.* xvi. 1, p. 221; *Hook. f. Fl. Brit. Ind.* v. p. 581.

Pouzolzia alienata, *Gaud. Bot. Voy. Uran.* p. 503.

Pouzolzia zeylanica, *Benn. Pl. Jav. Rar.* p. 67; *Wight, Icon.* t. 2101. fig. 45.

Urtica alienata, *Linn. Syst. Veg.* ed. 13, p. 709; *Roxb. Fl. Ind.* iii. p. 582.

Boehmeria alienata, *Willd. Sp. Pl.* iv. p. 341.

CHINA (*Millett* !); FOKIEN: Amoy (*Hance*, 1469 !); FORMOSA (*Oldham*, 527 !), Takow (*Playfair*, 72 ! *A. Henry*, 728, 784 !), Apes' Hill (*Playfair*, 72 !); HUPEH: Ichang (*A. Henry*, 4188 !); HAINAN (*A. Henry*, 8032 !). Mus. Brit.; Herb. Kew.

Subvar. **microphylla**, *Wedd. in DC. Prod.* xvi. 1, p. 221; *Hook. f. Fl. Brit. Ind.* v. p. 582.

Pouzolzia cochinchinensis, *Lour. Fl. Cochinch.* p. 654.

Boehmeria cochinchinensis, *Spreng. Syst.* iii. 844.

FORMOSA: Apes' Hill (*Playfair*, 81 !). Herb. Kew.

Var. **angustifolia**, *Wedd. in DC. Prod.* xvi. 1, p. 221; *Hook. f. Fl. Brit. Ind.* v. p. 581.

Pouzolzia glomerata, *Hassk. Cat. Hort. Bog. Alt.* p. 80; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 401.

HAINAN (*A. Henry*, 8432 !). Herb. Kew.

This species is also recorded from the following localities, without indication of which form is represented :—KWANGTUNG: Macao (*Gomes da Silva* ex Henriques in Bol. Soc. Brot. iii. p. 142); LUCHU ARCHIPELAGO: Amami Osima (*Döderlein* ex Engl. Jahrb. vi. p. 56).

Common in eastern tropical Asia and the Malayan Islands.

5. **Pouzolzia ovalis**, *Miq. Pl. Jungh.* i. p. 24; *Fl. Ind. Bat.* ii. p. 259; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 410; *Hance in Journ. Bot.* 1883, p. 357.

Pouzolzia viminea, *Wedd. in DC. Prod.* xvi. 1, p. 228; *Hook. f. Fl. Brit. Ind.* v. p. 581.

Pouzolzia borbonica, *Wight, Icon.* t. 2100. fig. 44.

Urtica viminea, *Wall. Cat.* n. 4616 partly.

Leucococcus vimineus, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) pp. 104–5.

KWANGTUNG: West River (*Ford*, 3!); YUNNAN: Mengtze (*A. Henry*, 9344, 9344 A!). Herb. Kew.

Tropical and subtropical India, with varieties extending through Malaya.

6. **Pouzolzia** sp.

HUPEH: Ichang (*A. Henry*, 80!). Herb. Kew.

Resembling some of the Indian forms of *P. ovalis*, Miq.

1. **Villebrunea frutescens**, *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 168; *DC. Prod.* xvi. 1, p. 235[21]; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 455; *Benth. Fl. Hongk.* p. 332; *Hance in Journ. Bot.* 1874, p. 262; *Maxim. in Mél. Biol.* ix. p. 648; *Hook. f. Fl. Brit. Ind.* v. p. 590.

Urtica frutescens, *Thunb. Fl. Jap.* p. 70.

Boehmeria frutescens, *Thunb. in Trans. Linn. Soc.* ii. p. 330.

Oreocnide frutescens, *Miq. Ann. Mus. Bot. Lugd.-Bat.* iii. p. 131.

Frutex Urticæ foliis et facie, *Thunb. Fl. Jap.* p. 367, n. 98.

HUPEH: Ichang (*A. Henry*, 3114!), Nanto (*A. Henry*, 3078, 3212!); YUNNAN: Mengtze (*A. Henry*, 9344 B!); FORMOSA: on the hills in the north-east, 400 ft. (*Wilford*, 507!); Tamsui (*Oldham*, 524!); HONGKONG: Victoria Peak (*Champion*, 481!); HAINAN: Hungmo (*B. C. Henry*!); LUCHU ARCHIPELAGO (*Wright*, 300!). Mus. Brit.; Herb. Kew.

Japan and the tropical Himalayas.

2. **Villebrunea scabra**, *Wedd. in Ann. Sc. Nat.* 4me sér. i. (1854) p. 196.

Urtica scabra, *Blume, Bijdr.* p. 504.

YUNNAN: Mengtze (*A. Henry*, 10682 A, 11497!). Herb. Kew.

Java.

1. **Debregeasia edulis**, *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 462; *DC. Prod.* xvi. 1, p. 235[24]; *Maxim. in Mél. Biol.* ix. p. 649; *Hance in Journ. Bot.* 1882, p. 38; *Franch. et Savat. Enum. Pl. Jap.* i. p. 442.

Morocarpus edulis, *Sieb. et Zucc. in Abh. Akad. Muench.* iv. 3, p. 218 (excl. plant. masc.); *Blume, Mus. Bot. Lugd.-Bat.* ii. p. 155, t. 16; *Miq. Ann. Mus. Lugd.-Bat.* iii. p. 130.

Missiessya parvifolia, *Wedd. in Ann. Sc. Nat.* 4me sér. i. p. 195.

FORMOSA: Kelung (*Oldham*, 525! 526 is a narrow-leaved form!); HUPEH: Ichang (*A. Henry*, 1201, 1201 A, *Watters*!); YUNNAN: Mengtze (*A. Henry*, 10140, 10536, 10536 A–B, 10702, 10702 A!). Mus. Brit.; Herb. Kew.

Japan.

2. **Debregeasia obovata**, *C. H. Wright*, n. sp.

Frutex pubescens. *Folia* obovata, acuminata, minute serrata, trinervia, supra hispida papillosaque, subtus albo-tomentosa, 4–6 poll. longa, 2–2½ poll. lata; petiolus 1–2 poll. longus. *Cymæ* axillares, subsessiles. *Fructuum* glomeruli 2 lin. diam.

YUNNAN: Mengtze (*A. Henry*, 11254, 11254 A!).

1. **Parietaria debilis**, var. **micrantha**, *Wedd. in DC. Prod.* xvi. 1, p. 235[45]; *Franch. Pl. David.* i. p. 272.

Parietaria debilis, *G. Forst. Fl. Ins. Austr. Prod.* p. 73; *Wedd. in Arch. Mus. Hist. Nat. Par.* ix. (1856) p. 514, t. 17, ff. 21–26; *Boiss. Fl. Orient.* iv. p. 1150; *Hook. f. Fl. Brit. Ind.* v. p. 593.

Parietaria micrantha, *Ledeb. Flor. Alt.* iv. p. 303, et *Icon.* t. 22.

CHIHLI: Jehol (*David*, 1941 ex *Franchet*), Peking (*Bretschneider*!), Taihanling (*Bullock*, 52!); KIANGSU: Shanghai (*Maingay*, 437!). Herb. Kew.

Widely diffused through the world, excluding Europe and the colder regions.

URTICACEÆ: THELYGONEÆ.

(By C. H. WRIGHT, A.L.S.)

1. **Theligonum macranthum**, *Franch. in Nouv. Arch. Mus. Par.* 2me sér. x. p. 109, t. xvi. fig. A.

SZECHUEN: South Wushan (*A. Henry*, 5588, 5652!). Herb. Kew.

Tibet.

125. JUGLANDACEÆ. (By S. A. Skan.)

1. **Juglans mandshurica,** *Maxim. in Bull. Phys.-Math. Acad. St. Pétersb.* xv. (1856) p. 127, et *Prim. Fl. Amur.* p. 76; *DC. Prod.* xvi. 2, p. 138; *Hance in Journ. Bot.* 1875, p. 135; *Maxim. in Mél. Biol.* viii. p. 630; *Franchet, Pl. David.* i. p. 282; *Gard. Chron.* 1888, iv. pp. 384 et 543, fig. 53; *Herder in Acta Hort. Petrop.* xii. p. 48.

Chihli: Pohuashan (*Bretschneider* !), Jehol (*David* ex *Franchet*); Hupeh: Changyang, Fang, Nanto and mountains to the northward (*A. Henry*, 3834, 5233, 5233 A !); Szechuen: South Wushan (*A. Henry*, 5233 B !); Yunnan: Mengtze (*A. Henry*, 10498 ! &c.). Mus. Brit.; Herb. Kew.

Amur and Mandshuria.

2. **Juglans regia,** *Linn. Sp. Pl.* ed. 1, p. 997; *DC. Prod.* xvi. 2, p. 136; *Kurz in Journ. Bot.* 1873, p. 193; *Brandis, For. Fl.* p. 497; *Debeaux, Fl. Tients.* p. 40; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 254; *Hook. f. Fl. Brit. Ind.* v. p. 595; *Hayne, Gewächse*, xiii. t. 17.

Shantung and Kiangsu (*Fauvel* ex *Franchet*); Yunnan (*Anderson* ex *Kurz*), Mengtze (*A. Henry*, 10507, 10507 A ! cult.?). Mus. Brit.; Herb. Kew.

Caucasus to India.

Var. **sinensis,** *C. DC. in Ann. Sc. Nat.* 4me sér. xviii. p. 33, ff. 38 et 39; *DC. Prod.* xvi. 2, p. 137; *Maxim. in Mél. Biol.* viii. p. 630; *Debeaux, Fl. Tients.* p. 40; *Franch. et Savat. Enum. Pl. Jap.* i. p. 455.

Juglans regia, *Lour. Fl. Cochinch.* p. 573; *Maxim. Prim. Fl. Amur.* p. 470.

Juglans japonica, *Sieb. ex Miq. Ann. Mus. Bot. Lugd.-Bat.* iii. p. 103.

China (hb. *DC.*); Chihli: near Peking (*Skatschkoff* ex *Maxim.*).

Japan.

1. **Pterocarya Delavayi,** *Franchet in Journ. de Bot.* 1898, p. 317.

Yunnan: woods at the base of the Maeulchan (*Delavay* ex *Franchet*).

2. **Pterocarya hupehensis,** *Skan*, n. sp.

Arbor 30 ped. alta (*Henry*). *Ramuli* glabri vel passim fusco

furfuracei, sparse lenticellosi. *Folia* 5–9-foliolata; rhachis glabra, nisi foliolorum prope insertionem flavo-tomentosa; foliola usque ad 4 poll. longa, 1½–1¾ poll. lata, ovato-lanceolata vel oblonga, apice sensim acuminata, basi foliolo terminali cuneato excepto oblique rotunda, fere sessilia, regulariter serrulata, supra glabra vel minute griseo-lepidota, infra brunneo-lepidota et in axillis nervorum primariorum lateralium stellato-tomentosa, nervis primariis lateralibus utrinque circiter 14 prominulis. *Flores* desunt. *Spica fructuum* 12–18 poll. longa, rhachi sulcata sparse glandulosa. *Fructus* minute glandulosi, alis suborbicularibus ½ poll. diametro.

HUPEH: Changyang (*A. Henry*, 6158!). Herb. Kew.

This appears to be closely allied to *Pterocarya Delavayi*, Franchet, of which we have seen no specimen. According to the description, however, that species has fruits covered with short hairs, whereas those of *P. hupehensis* are glabrous.

3. **Pterocarya macroptera**, *Batalin in Act. Hort. Petrop.* xiii. p. 100.

KANSUH: Idshushan mountain (*Potanin*!). Herb. Kew.

4. **Pterocarya Paliurus**, *Batalin in Act. Hort. Petrop.* xiii. p. 101; *Franchet in Journ. de Bot.* 1898, p. 318.

CHEKIANG: Ningpo mountains (*Faber*, 75!): HUPEH: Fang and Changyang (*A. Henry*, 6598, 7694!); SZECHUEN: near Tchenkeoutin (*Farges* ex *Franchet*). Herb. Kew.

5. **Pterocarya stenoptera**, *C. DC. in Ann. Sc. Nat.* 4^me^ sér. xviii. p. 34; *DC. Prod.* xvi. 2, p. 140; *Maxim. in Mél. Biol.* viii. p. 639; *Hance in Journ. Bot.* 1873, p. 376; *Lavall. Arbor. Segrez.* p. 65, t. 19; *Franchet in Journ. de Bot.* 1898, p. 317.

Pterocarya chinensis, *Hort.*; *Lavall. Arbor. Segrez.* p. 65.

Pterocarya lævigata, *Hort.*; *Lavall. Arbor. Segrez.* p. 65.

KIANGSU: Fengwangshan (*Carles*!), Shanghai (*Carles*, 368! *Sampson*, 1745!); CHEKIANG: mountains of Ningpo and neighbourhood (*Faber*! *Fortune*! *Oldham*, 73!); KIANGSI: Kiukiang (*Shearer*!); HUPEH: Ichang (*A. Henry*, 971, 1332!); SHENSI and KANSUH (*Piasezki* ex *Maximowicz*); SZECHUEN: near Kouifou (*Delavay* ex *Franchet*); KWEICHAU: Ganpi (*Bodinier* ex *Franchet*); YUNNAN: Mengtze (*A. Henry*, 10573!); KWANGSI (*Graves*! *Hance*, 17623!). Mus. Brit.; Herb. Kew.

Tonquin (forma *tonkinensis*).

1. **Engelhardtia acerifolia**, *Blume, Fl. Jav.* p. 11, tt. 2 et 5 B; *DC. Prod.* xvi. 2, p. 141; *Miq. Fl. Nederl. Ind.* i. 1, p. 842; *Hook. f. Fl. Brit. Ind.* v. p. 596.

Pterilema acerifolium, *Reinw. Syllog. Plant.* ii. p. 13.

Yunnan: Mengtze (*A. Henry*, 11269!). Herb. Kew.

Sikkim Himalaya and Malaya.

2. **Engelhardtia Colebrookiana**, *Lindl. in Wall. Pl. As. Rar.* iii. p. 4, t. 208; *DC. Prod.* xvi. 2, p. 141; *Brandis, For. Fl.* p. 499; *Gamble, Manual Ind. Timb.* p. 393; *Hook. f. Fl. Brit. Ind.* v. p. 596.

Engelhardtia villosa, *Kurz, For. Fl.* ii. p. 491.

Juglans? villosa, *Wall. Cat.* n. 4945.

Yunnan: Mengtze (*Hancock*, 511! *A. Henry*, 10502, 10502 A, 11423!); Hainan (*B. C. Henry*, 25, 58!). Herb. Kew.

Western Himalaya, Assam, Khasia mts., Burma, and Indian Archipelago.

3. **Engelhardtia Wallichiana**, *Lindl. in Wall. Cat.* n. 4942; *DC. Prod.* xvi. 2, p. 141; *Hook. f. Fl. Brit. Ind.* v. p. 596.

Juglans pterococca, *Roxb. Fl. Ind.* iii. p. 631, partim.

Yunnan: Mengtze (*A. Henry*, 11149!). Herb. Kew.

Malaya.

Var. **chrysolepis**, *C. DC. in DC. Prod.* xvi. 2, p. 142.

Engelhardtia chrysolepis, *Hance in Ann. Sc. Nat.* 4^me^ sér. xv. p. 227, et *in Journ. Linn. Soc.* xiii. p. 124; *Maxim. in Mél. Biol.* ix. p. 30.

Engelhardtia sp., *Benth. Fl. Hongk.* p. 318.

Hongkong (*Hance*, 7433!); Hainan (*A. Henry*, 8444!). Mus. Brit.; Herb. Kew.

Tonquin.

1. **Platycarya strobilacea**, *Sieb. & Zucc. in Abhandl. der Akad. Münch.* iii. 3, p. 742, t. 5; *DC. Prod.* xvi. pt. 2, p. 145; *Maxim. in Mél. Biol.* viii. p. 640; *Franchet, Pl. David.* i. p. 282.

Fortunæa chinensis, *Lindl. in Journ. Hort. Soc.* i. p. 150; *Rev. Hort.* série 2, v. p. 282; *Walp. Ann.* i. p. 202.

China: without locality (*Fortune*, A 63!, *Champion*!); Chekiang (*Hickin*), Ningpo (*Cooper*! *Faber*!); Taihoo Lake, hills near Huchaii (*Carles*, 196!); Kiangsi: Kiukiang (*Shearer*!); Hupeh: Chienshih (*A. Henry*, 6014!), Ichang (*A. Henry*, 69, 1008, 1358, 1606!); Yunnan: Mengtze (*A. Henry*, 9937!); Kwangtung (*Ford*, 306!); Corea: Port Chusan (*Wilford*, 958!); Corean Archipelago: Green Island (*Oldham*, 1093!). Mus. Brit.; Herb. Kew.

Japan.

126. MYRICACEÆ. (By S. A. SKAN.)

1. **Myrica adenophora**, *Hance in Journ. Bot.* 1883, p. 357.

HAINAN: Tingon (*B. C. Henry*, hb. *Hance*, 22159 !). Mus. Brit.

2. **Myrica rubra**, *Sieb. et Zucc. Fam. Nat. Fl. Jap.* ii. p. 106; *Hook. Journ. Bot.* vi. p. 115; *Benth. Fl. Hongk.* p. 322; *Franch. et Savat. Enum. Pl. Jap.* i. p. 455; *Banks, Icon. Sel. Kæmpf.* t. 37.

Myrica Nagi, *C. DC. in DC. Prod.* xvi. 2, p. 151; *Miq. Ann. Mus. Bot. Lugd.-Bat.* iii. p. 129: *Hance in Journ. Linn. Soc.* xiii. p. 124; *Hook. f. Fl. Brit. Ind.* v. p. 597; *Bot. Mag.* t. 5727, non *Thunb. Fl. Jap.* p. 76.

Myrica sapida, *Wall. Tent. Fl. Nap.* p. 59, t. 45; *DC. Prod.* xvi. 2, p. 152.

Morella rubra, *Lour. Fl. Cochinch.* p. 548; *Benth. et Hook. f. Gen. Pl.* iii. p. 401.

FOKIEN: Amoy (*Swinhoe* !); FORMOSA: Tamsui (*Oldham*, 507 !); YUNNAN: Mengtze (*Hancock*, 406 ! *A. Henry*, 9015, 9015 A–D !); HONGKONG (*Champion*, 176 !); LUCHU ARCHIPELAGO (*Wright*, 316 !). Mus. Brit.; Herb. Kew.

India, Malaya, Japan.

[In the Kew Herbarium are male specimens from Yunnan (*A. Henry*, 11057, and *Hancock*, 500), which may prove to be a distinct variety of *M. rubra*, or even a new species. The leaves are much smaller than is usual in *M. rubra*, and though sometimes entire they are more frequently distinctly toothed above the middle. An immature male specimen from Formosa (*A. Henry*, 1259), with small toothed leaves, is probably a new species allied to *M. adenophora*, Hance.]

127. CUPULIFERÆ: BETULEÆ.

(By I. H. BURKILL, F.L.S.)

1. **Betula alba**, *Linn. Sp. Plant.* ed. 1, p. 982; *Herder in Act. Hort. Petrop.* xii. p. 48; *Sargent, Forest-Fl. Japan*, p. 61.

Var. **mandshurica**, *Regel in Bull. Soc. Nat. Mosc.* xviii. p. 399, t. 7; *Franchet, Pl. David.* i. p. 281.

CHIHLI: Peking (*David* ex *Franchet*), Jehol (*David*, 1740, 2187, ex *Franchet*).

Var. **Tauschii**, *Regel in DC. Prod.* xvi. 2, p. 135; *Palibin in Act. Hort. Petrop.* xiv. p. 140.

CHIHLI: Lantsikala (*Palibin*).

Var. **verrucosa**, *Franchet*, *Pl. David.* i. p. 281.

Betula verrucosa, *Ehrh. Beitr.* vi. p. 98.

CHIHLI: Siwan, Pohuashan (*David* ex *Franchet*).

Var. **vulgaris**, *Regel. Monogr. Bet.* p. 17; *Franchet in Journ. de Bot.* 1899, p. 206.

SZECHUEN: Tongolo and Tachienlu (*Soulié*, 566!). Mus. Paris.

This polymorphous species is widely distributed in North Temperate Regions. Fauvel, in Mém. Soc. Sc. Nat. Cherbourg, xxii. p. 200, records that *Betula alba* is cultivated in Chekiang at Ningpo.

2. **Betula albo-sinensis** *Burkill*, n. sp.

Betula Bhojpattra, var. sinensis, *Franchet in Journ. de Bot.* 1899, p. 207.

Rami nitentes, glabri, juniores colore iis *B. albæ* consimiles nec *B. utilis* dissimiles, lenticellis albidis conspersi. *Folia* ovata, acuminata, glabra, basi rotundata, margine argute serrata, nervis lateralibus utrinque 9–10 (*i. e.* folia foliis *B. utilis* simillima); petiolus 3–6 lin. longus, glaber. *Amenta* 1–2 (sæpissime 2) ad apices ramorum brevium enata, 1½–1¾ poll. longa, fructu maturo 4–5 lin. crassa; pedunculus 2 lin. longus; bracteæ glabræ, ad nuces delapsas deciduæ, 2–2⅓ lin. longæ, ad lobos laterales 1½ lin. latæ, lobis lateralibus rotundatis, lobo terminali lineari-lanceolato apice acuto. *Samara* nitens, alata, alis utrinque tertiam partem totius latitudinis formantibus, 1–1¼ lin. lata, nucleo ovato e medio apicem versus conspicue angustato, iis *B. utilis* minor.

SZECHUEN: Tchenkeoutin (*Farges*!). Mus. Paris.

The leaves certainly suggest *B. utilis* (*B. Bhojpattra*), but never, it seems, are the fruits of this species so small as in the specimens here described.

3. **Betula alnoides**, *Ham. in D. Don, Prod. Fl. Nep.* p. 58; *Hook. f. Fl. Brit. Ind.* v. p. 599.

Betula acuminata, *Wall. Pl. As. Rar.* p. 7, t. 109; *Franchet in Journ. de Bot.* 1899, p. 207.

SZECHUEN: Tchenkeoutin (*Farges*!); YUNNAN: Mengtze (*A. Henry*, 10437!). Herb. Kew; Mus. Paris.

Var. **pyrifolia**, *Franchet in Journ. de Bot.* 1899, p. 207.

HUPEH: Patung (*A. Henry*, 1414, 1443!), Chienshih (*A.

Henry, 7402 !), Nanto and mountains to northward (*A. Henry*, 3942 !), Changyang (*A. Henry*, 5238 !); SZECHUEN: Omei, 3500 ft. (*Faber*, 212 !), S. Wushan (*A. Henry*, 5667 !), Heoupin, Tchenkeoutin at 5600 feet (*Farges* !); YUNNAN: Tchenfongchan (*Delavay*, 537 !), Longki (*Delavay* !). Mus. Brit.; Herb. Kew.; Mus. Paris.

The type occurs also in North India and Upper Burma.

4. **Betula chinensis**, *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 47.

Betula exalata, *S. Moore in Journ. Linn. Soc.* xvii. p. 386.

CHIHLI: Peking, near the summit of Mt. Conolly, 5000–6000 ft. (*Bretschneider*, 77 ! *Bullock*, 92 !); SHINGKING: Chienshan (*Ross*, 223, 428, 478, 553 !). Herb. Kew.

Ross's no. 177 may be the same species.

5. **Betula dahurica**, *Pall. Fl. Ross.* i. p. 60, t. 39. f. 1; *Maxim. Ind. Fl. Pekin. in Prim. Fl. Amur.* p. 477, et *in Bull. Soc. Nat. Mosc.* 1879, p. 47; *Regel, Monogr. Bet.* p. 55, et *in DC. Prod.* xvi. 2, p. 174; *Franchet, Pl. David.* i. p. 282; *Herder in Act. Hort. Petrop.* xii. p. 67.

SHINGKING: between Mukden and Tungscheshien (*James* !); CHIHLI: Jehol (*David*, 1693, 1947, 2173, ex *Franchet*), Mt. Pohuashan (*Möllendorf* ex *Maximowicz*). Herb. Kew.

Northern Asia.

6. **Betula Delavayi**, *Franchet in Journ. de Bot.* 1899, p. 205.

YUNNAN: wood of Koutoui above Mosoyn at 9000 ft. (*Delavay*, 3725 !). Mus. Paris.

It is connected with *B. utilis* through the variety *Prattii* of the latter. Probably *B. Potanini* is very closely allied to this species.

7. **Betula Fargesii**, *Franchet in Journ. de Bot.* 1899, p. 205.

HUPEH: Fang (*A. Henry*, 6879 !); SZECHUEN: Heoupin, near Tchenkeoutin at 7200 feet (*Farges*, 1012 !). Herb. Kew; Mus. Paris.

8. **Betula insignis**, *Franchet in Journ. de Bot.* 1899, p. 206.

SZECHUEN: Tchenkeoutin at 4600 ft. (*Farges*, 83 !). Mus. Paris.

A most marked species.

9. **Betula Potanini**, *Batalin in Act. Hort. Petrop.* xiii. p. 101.

SZECHUEN: at the river Hounton near Sanshei (*Potanin* ex *Batalin*).

[*Betula rosea*, David *ex* Bretschn. Hist. Eur. Bot. Disc. p. 851, who thinks it may be the following species. David gathered it in Szechuen.]

10. **Betula utilis**, *D. Don, Prod. Fl. Nep.* p. 58; *Hook. f. Fl. Brit. Ind.* v. p. 599.

Betula Bhojpattra, *Wall. Pl. As. Rar.* ii. p. 7; *A. DC. in DC. Prod.* xvi. 2, p. 177; *Bretschn. Hist. Eur. Bot. Disc.* pp. 850, 987.

KANSUH: mountains east of Lake Kokonor, and on Upper Hoangho (*Przewalski* ex *Bretschneider*); HUPEH: Fang, 8000–9000 feet (*A. Henry*, 6798, 6798 A!). Mus. Brit.; Herb. Kew.

Var. **Prattii**, *Burkill. Amenti bracteæ* margine ciliatæ: lobi spathulati. *Pedunculus* pubescens.

SZECHUEN: Tachienlu, 13,500 feet (*Pratt*, 236!). Mus. Brit.; Herb. Kew.; Mus. Paris.

The type is found in the Himalaya, Western Tibet, and Afghanistan; it is also presumedly found in Japan. I have seen no Japanese specimens which I could unhesitatingly refer to this species; but, so far as English Herbaria are concerned, better and more ripe material is desirable. A form approaching the variety *Prattii* occurs in Kumaon, where Wallich collected it; the ciliation is, however, somewhat less obvious.

1. **Alnus cremastogyne**, *Burkill*, n. sp.

Arbor ramis cortice glabris. *Folia* obovata, apice breviter acuminata, basi obtusa vel rotundata, margine simpliciter argute serrata, dentibus iis *A. japonicæ* similibus, supra glabra, infra in axillis nervorum conspicuorum puberula, 2½–5 poll. longa, 2–2¾ poll. lata; petiolus ½–¾ poll. longus. *Floratio* coætanea. *Amenta* feminea solitaria, florentia ut videtur glutinosa, brevia, ad apices pedunculorum tenuium dependentia, 5–6 lin. longa; pedunculus 1½–2 poll. longus. *Ovarii* alæ angustæ, utraque vix sextam partem ovarii totius latitudinis formans. *Amenta* masculina et *fructus* maturus ignoti.

SZECHUEN: without locality (*A. Henry*, 8890!), Tachienlu (*Pratt*, 424!). Mus. Brit.; Herb. Kew.

2. **Alnus maritima**, *Nutt. Sylv. Am. Suppl.* i. p. 34, t. 10.

Var. **japonica**, *Regel in DC. Prod.* xvi. 2, p. 186, pro parte.

Alnus japonica, *Sieb. et Zucc. in Abh. Akad. Münch.* iv. 3, p. 230; *Sargent, Forest-Fl. Japan*, p. 63, t. 20.

Alnus maritima, var. arguta, *Regel in DC. Prod.* xvi. 2, p. 186; *Herder in Act. Hort. Petrop.* xii. p. 73.

COREA: Port Chusan (*Wilford*, 938!). Herb. Kew.

✓ Var. **formosana**, *Burkill. Foliorum* forma varietas varietati japonicæ similis. *Amenta* in ramis foliiferis coætanea producta.

Alnus maritima, *Henry in Trans. Asiatic Soc. Japan*, xxiv. Suppl. p. 90.

Alnus maritima, var. japonica, *Regel in DC. Prod.* xvi. 2, p. 186, quoad plantam formosanam.

FORMOSA: (*Oldham*, 508!), Tamsui (*A. Henry*, 1389, 1394!). Mus. Brit.; Herb. Kew.

Japan, Mandshuria, and N. America.

The Chinese of Formosa name it "Chik-ko." Regel's varieties *japonica* and *arguta* can hardly be kept apart; and the recognition of the Formosan form differing from that of Japan in its time of flowering speaks for the union of the varieties of the Old and New Worlds into one species.

3. **Alnus nepalensis**, *D. Don, Prod. Fl. Nep.* p. 58; *Regel, Monogr. Bet.* p. 83, t. 16. ff. 4–6, 13, 40–43, et *in DC. Prod.* xvi. 2, p. 181; *Kurz in Journ. Bot.* 1873, p. 193; *Hook. f. Fl. Brit. Ind.* v. p. 600; *Franchet in Journ. de Bot.* 1899, p. 208.

YUNNAN: Holka and Poneline (*Anderson*!), Mengtze (*Hancock*, 426! *A. Henry*, 9223!), wood of Talongtan above Tapintze, and brooks at Taouangmiao between Houangkiapin and Tali at 6000 feet (*Delavay*, 538, 539, 3564, 4188, 4541!). Herb. Kew; Mus. Paris.

[*Alnus setchuanensis*, David (*A. sinensis*, David), *ex* Bretschn. Hist. Eur. Bot. Disc. p. 844, may be *A. viridis*. It was obtained in Shensi and Szechuen.]

[*Alnus sinensis*, Fauvel in Mém. Soc. Sc. Nat. Cherbourg, xxiii. p. 200, is a tree cultivated at Ningpo, Chekiang, unknown to me.]

4. **Alnus viridis**, *DC. Fl. Fr.* iii. p. 304.

Var. **julacea**, *Franchet, Pl. David.* i. p. 281; *Herder in Acta Hort. Petrop.* xii. p. 69; *Bretschn. Hist. Eur. Bot. Disc.* p. 844.

Alnus crispa, *C. Koch, Dendrologie*, ii. 2, p. 626.

SHENSI: Central Shensi (*David* ex *Franchet*).

Europe, Siberia, Japan, and N. America.

A plant from Corea (*Carles*) at Kew may possibly belong to this species.

CUPULIFERÆ: Coryleæ.

(By I. H. Burkill, F.L.S.)

1. **Carpinus cordata,** *Blume, Mus. Bot. Lugd.-Bat.* i. p. 309; *A. DC. in DC. Prod.* xvi. 2, p. 128.

Shensi: Mt. Kintousan, Huantousan, Panali and Laoysan near Fulu and Fouscianfu (*Scallan*!). Herb. Florent.; Herb. Kew.

Var. **chinensis,** *Franchet in Journ. de Bot.* 1899, p. 202.

Szechuen: S. Wushan (*A. Henry*, 5886!), Tchenkeoutin at 4600 feet (*Farges*, 14!). Mus. Brit.; Herb. Kew.; Mus. Paris.

The type occurs in Mandshuria and Japan. The variety named *chinensis* is distinguished from it chiefly in the shortness and hairiness of the peduncle when the fruit is ripe.

2. **Carpinus faginea,** *Lindl. in Wall. Pl. As. Rar.* ii. p. 5; *A. DC. in DC. Prod.* xvi. 2, p. 127; *Hook. f. Fl. Brit. Ind.* v. p. 626.

Carpinus viminea?, *Sargent, Sylva N. Am.* ix. p. 40, footnote no. 5.

Szechuen: S. Wushan (*A. Henry*, 5520 A!).

Also in the Himalaya.

3. **Carpinus laxiflora,** *Blume, Mus. Bot. Lugd.-Bat.* i. p. 309.

Var. **Davidi,** *Franchet in Journ. de Bot.* 1899, p. 203.

Carpinus laxiflora, *Blume*; *Franchet, Pl. David.* i. p. 279, t. 11.

Kiangsi: Lychan mountain near Kiukiang (*David*, 750).

Var. **Fargesii,** *Burkill.*

Carpinus Fargesii, *Franchet in Journ. de Bot.* 1899, p. 202.

Szechuen: Ylongky near Tchenkeoutin at 4600 feet (*Farges*!). Mus. Paris.

Var. **macrostachya,** *Oliver, in Hook. Ic. Plant.* t. 1989.

Hupeh: N. Patung (*A. Henry*, 7013!). Mus. Brit.; Herb. Kew.

The type in Japan.

4. **Carpinus polyneura,** *Franchet in Journ. de Bot.* 1899, p. 202.

Hupeh: Nanto and mountains to northward (*A. Henry*, 4472!); Szechuen: N. Wushan (*A. Henry*, 7020, 7020 A, 7063!), S. Wushan (*A. Henry*, 5520, 7219!), Tchenkeoutin (*Farges*!). Mus. Brit.; Herb. Kew; Mus. Paris.

This species differs from *C. Turczaninowii* in the polished stems and acuminate leaves. There is in Herb. Mus. Paris. a specimen collected by Farges, which connects these two; perhaps they should be considered varieties of one species.

5. **Carpinus pubescens**, *Burkill*, n. sp.

Arbor (fide *A. Henry*) 30 ped. alta. *Rami* cortice grisei, nec nitentes, juniores pubescentes. *Perularum* bracteæ glabræ. *Folia* ovata vel elongato-ovata, basi subcordata, apice acuminata, margine regulariter serrata, nervis lateralibus utrinque 11–13, utroque in quartum dentem excurrente, supra glabra subnitentia, infra ad costam et nervos pubescentia, 2½–3½ poll. longa, 1–1½ poll. lata; petiolus 3–4 lin. longus, pubescens vel fere subvillosus. *Amenta* (fructu maturo) ad 6 poll. longa, nec dense bracteata, internodiis 1–2 lin. longis, ad apices ramorum folia 2–4 gerentium enata; pedunculus pubescens; bracteæ semi-rotundatæ vel semi-ovatæ, apice obtusæ vel obtusiusculæ vel rotundatæ, basi obliquæ, glabræ, 7–9 lin. longæ; dimidium majus 2–3 lin. latum, margine dentibus 7–9 inconspicuis ornatum; dimidium minus 1–1½ lin. latum, margine integrum, nervo uno e basi ad marginem oblique excurrente vix ad medium attingente. *Nux* glandulis dense obtecta vel maturissima glabrescens, 2 lin. longa et lata.

YUNNAN: Mile district (*A. Henry*, 9929!). Herb. Kew.

The blunt or rounded bracts and the very long fruiting catkins seem to afford characters which make this plant easy to recognize.

6. **Carpinus Turczaninowii**, *Hance in Journ. Linn. Soc.* x. p. 203; *Maxim. in Mél. Biol.* xi. p. 315; *Franchet, Pl. David.* i. p. 278, t. 10, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 254.

CHIHLI: hills near Peking (*Bushell*! *Carles*! *Williams*! *Bullock*! *David*, 446, ex *Franchet*, *Kirilow* ex *Maximowicz*); SHANTUNG: Chefoo (*Fauvel* ex *Franchet*); SHENSI: Mount Huantousan near Tascetsuen (*Giraldi*!). Mus. Brit.; Herb. Kew.; Herb. Florent.

A specimen so named (*Franchet in Journ. de Bot.* 1899, p. 203) from Szechuen (*Farges*!) in Mus. Paris. connects this and *C. polyneura*.

7. **Carpinus yedoensis**, *Maxim. in Mél. Biol.* xi. p. 314, t. 11. f. 2; *Franchet in Journ. de Bot.* 1899, p. 203.

SZECHUEN: Tchenkeoutin (*Farges*!). Mus. Paris.

Cultivated in Japan.

1. **Ostryopsis Davidiana**, *Decne. in Bull. Soc. Bot. Fr.* xx. p. 155; *Hance in Journ. Bot.* 1875, p. 137; *Maxim. in Mél. Biol.* xi. p. 316; *Palibin in Act. Hort. Petrop.* xiv. p. 140; *Bretschn. Hist. Eur. Bot. Disc.* p. 1061.

Corylus Davidiana, *Baill. Hist. Pl.* vi. p. 224; *Franchet, Pl. David.* i. p. 278.

CHIHLI: near Peking (*David! Bretschneider*, 714!), Pohuashan (*Bretschneider!*), Jehol (*David*, 1694, ex *Decaisne*), Huangtuliangtze (*Palibin*); KANSUH: near Lantschen on the Hoangho (*Piasezki* ex *Maximowicz*), Lidshapu (*Potanin!*). Mus. Brit.; Herb. Kew.

Var. **cinerascens**, *Franchet in Bull. Soc. Bot. Fr.* xxxii. p. 27.

Ostryopsis Davidiana, *Dcne.*; *Franchet in Journ. de Bot.* 1899, p. 200.

YUNNAN: Mosoyn, near Lankong, at 7500 feet, on chalk hills (*Delavay*, 37, 830!). Mus. Paris.

The type also in Mongolia.

1. **Ostrya virginica**, *Willd. Sp. Pl.* iv. p. 469; *Maxim. in Mél. Biol.* xi. p. 317. Var. **japonica**, *Maxim. ex Sargent, Forest-Fl. Japan*, p. 66, t. 22.

Ostrya carpinifolia, *Franchet in Journ. de Bot.* 1899, p. 204.

Ostrya japonica, *Sargent, loc. cit.*

HUPEH: Fang (*A. Henry*, 6581!); SZECHUEN: near Tcheukeoutin (*Farges!*). Mus. Brit.; Herb. Kew.; Mus. Paris.

Japan and N. America.

The forms of the New and Old Worlds differ from one another, and seem distinct enough to be maintained as varieties.

1. **Corylus Colurna**, *Linn. Sp. Plant.* ed. 1, p. 999; *A. DC. in DC. Prod.* xvi. 2, p. 131; *Boiss. Fl. Or.* iv. p. 1176; *Hook. f. Fl. Brit. Ind.* v. p. 625. Var. **chinensis**, *Burkill.*

Corylus chinensis, *Franchet in Journ. de Bot.* 1899, p. 197

YUNNAN: Gorges of Santchangkiou, between Tali and Hokin at 7200 feet (*Delavay*, 197!); HUPEH: S. Patung (*A. Henry*, 7533!); SZECHUEN: N. Wushan (*A. Henry*, 7111!). Herb. Kew.; Mus. Paris.

This variable species occurs in Central Europe, Asia Minor, and the Himalaya.

2. **Corylus ferox**, *Wall. Pl. As. Rar.* i. p. 77, t. 87; *A. DC. in DC. Prod.* xvi. 2, p. 129; *Hook. f. Fl. Brit. Ind.* v. p. 625. Var. **thibetica**, *Franchet in Journ. de Bot.* 1899, p. 200.

Corylus tibetica, *Batalin in Act. Hort. Petrop.* xiii. p. 91.

KANSUH: by the River Tshagon (*Potanin!*); HUPEH: Fang (*A. Henry*, 6778, 6778 A!), Ichang (*A. Henry*, 608!); SHENSI: Thoupeishan (*Giraldi!*); SZECHUEN: Tachienlu (*Pratt*, 5!), Tsepauly near Tchenkeoutin (*Farges*, 809!). Mus. Brit.; Herb. Kew.; Mus. Paris.; Herb. Florent.

The type in the Central and Eastern Himalaya.

The more spinous involucres separate the variety from the Himalayan type. There is apparently no other means of distinguishing the two forms.

3. **Corylus heterophylla**, *Fisch. ex Bess. in Flora*, 1834, *Beibl.* 24; *A. DC. in DC. Prod.* xvi. 2, p. 130; *Maxim. in Mél. Biol.* xi. p. 317; *Franchet, Pl. David.* i. p. 278; *Kanitz in Ber. math.-nat. Ungarn*, iii. (Reprint) p. 8, et *Pl. Exped. Szech.* p. 57; *Herder in Act. Hort. Petrop.* xi. p. 362.

Corylus Avellana, *Baker & S. Moore in Journ. Linn. Soc.* xxvii. p. 387.

N. China (*Skatschtow* ex *Maximowicz*); Shingking: Fungwhangshan (*Ross*, 19!), between Mukden and Tungscheshien, and Mt. Chanpeishan (*James*!); Chihli: Peking (*David*, 433, ex *Franchet*), Mt. Siaowutaishan near Peking (*Möllendorff*, 78!), Pohuashan (*Bretschneider* ex *Maximowicz*), Jehol (*David*, 1730!); Shensi: Mt. Kinquasan near Sceki**n**tsuen (*Giraldi*, 55!); Kansuh: Dshoni river (*Potanin*!), Lantschan, south of the Hoangho (*Piasezki* ex *Maximowicz*, in litt.), north of Hoszhien (*Szechenyi* ex *Kanitz*); Corea (*Veitch*, 93!). Mus. Brit.; Herb. Kew; Herb. Florence.

Var. **Crista-galli**, *Burkill*. *Bracteæ* margine modo cristæ-galli cristatæ, nuci fere æquales nec eam longe superantes, dentibus subtriangularibus. *Petioli* setis glanduliferis quam bracteæ densius tecti.

Hupeh: Patung and Tungku (*A. Henry*, 1449, 2854, 2866, 6413!); Hunan: Shihmen (*A. Henry*, 7942!); Yunnan: gorges of Lanho near Lankong (*Delavay*, 128!). Mus. Brit.; Herb. Kew.; Mus. Paris.

Var. **sutchuenensis**, *Franchet in Journ. de Bot.* 1899, p. 199.

Szechuen: Mayetse (*Farges*, 809!). Mus. Paris.

Var. **yunnanensis**, *Franchet in Journ. de Bot.* 1899, p. 198.

Yunnan: Mengtze, at 6500 feet, and Mile at 6000 feet (*A. Henry*, 9682, 9894!), Ridge of Heechanmen at 10,000 feet (*Delavay*!), Mt. Tsongchan above Tali (*Delavay*, 555!). Herb. Kew.; Mus. Paris.

Eastern Siberia, Japan, and China, where its southern forms approach *C. Colurna*. It is to be sought for in the Himalaya.

Dr. Henry notes the value of the timber in Central China, but the form of the most southern province, *yunnanensis*, according to the same authority, is only a bush 3–6 feet high of exposed places.

4. **Corylus mandshurica**, *Maxim. in Bull. phys.-math. Acad. Pétersb.* xv. p. 137, et *in Ind. Fl. Pekin. in Prim. Fl. Amur.* p. 477; *Herder in Act. Hort. Petrop.* xi. p. 363.

Corylus rostrata, *Ait.*, var. mandshurica, *Regel in Bull. phys.-math. Acad. Pétersb.* xv. p. 221; *A. DC. in DC. Prod.* xvi. 2, p. 133; *Hance in Journ. Linn. Soc.* xiii. (1872) p. 87, et *in Journ. Bot.* 1875, p. 137; *Maxim. in Mél. Biol.* xi. p. 319; *Franchet, Pl. David.* i. p. 278; *Palibin in Act. Hort. Petrop.* xiv. p. 139.

SHINGKING: Mount Chanpeishan and to the northward (*James*!), Chienshan (*Ross*, 369!); CHIHLI: Peking (*David*, *Tatarinow* ex *Maximowicz*), Mount Conolly and Pohuashan (*Bretschneider*, 690! *Möllendorff*!), Jehol (*David*, 2102, ex *Franchet*); SZECHUEN: Tchenkeoutin (*Farges*!). Mus. Brit.; Herb. Kew.; Mus. Paris.

Eastern Siberia and Japan.

Var. **Fargesii**, *Franchet in Journ. de Bot.* 1899, p. 109.

SZECHUEN: Wood of Heoupin near Tchenkeoutin at 4600 feet (*Farges*, 1307!). Mus. Paris.

CUPULIFERÆ: QUERCINEÆ.*

(By S. A. SKAN.)

1. **Quercus aliena**, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 298; *DC. Prod.* xvi. 2, p. 14; *Hance in Journ. Bot.* 1875, p. 361; *Forbes in Journ. Bot.* 1884, p. 85; *Franch. et Savat. Enum. Pl. Jap.* i. p. 445; *Bretschneider, Chinese Silkworm Trees*, pp. 5–6; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 219; *Kanitz, Pl Exped. Széch.* p. 56.

Quercus Griffithii, *Hook. f. et Thoms. in DC. Prod.* xvi. 2, p. 14, et *in Fl. Brit. Ind.* v. p. 602; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 218; *Franchet in Journ. de Bot.* 1899, p. 147; *King in Ann. Bot. Gard. Calc.* ii. p. 24, t. 18.

CHIHLI: near Peking (*Bretschneider*! *Möllendorff*! *Skatschkoff*!); HUPEH: Ichang, Nanto and mountains to the northward

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* When Dr. A. Henry was last in England he critically sorted all the Kew specimens of Chinese *Quercus*, which aided me considerably with regard to certain species.—S. A. SKAN.

(*A. Henry*, 68, 68 A, 553, 968, 1279, 1899, 2292, 2293!); HUNAN: Shihmen (*A. Henry*, 7945!); SHENSI: various localities (*Giraldi*!); KANSUH (*Szechenyi* ex *Kanitz*); SZECHUEN: near Tchenkeoutin (*Farges*!); YUNNAN: Hotha (*Anderson*), Mengtze (*A. Henry*, 9394, 9394 A, 11298, 11499!), Piiouse, above Tapintze, and Kiaochetong (*Delavay*!); COREAN ARCHIPELAGO (*Oldham*, 757!). Mus. Brit.; Mus. Paris.; Herb. Florent.; Herb. Kew.

India and Japan.

✓ **Var. urticæfolia**, *Skan*.

Quercus Griffithii, *Hook. f. et Thoms.*, var. urticæfolia, *Franchet in Journ. de Bot.* 1899, p. 148.

YUNNAN: near Heechanmen (*Delavay*!). Mus. Paris.

✓ **2. Quercus** (§ **Lithocarpus**) **amygdalifolia**, *Skan*, n. sp.

Ramuli juniores teretes, glabri, passim griseo-punctati. *Folia* petiolata, gracilia, ovato-lanceolata, 3–4 poll. longa, $\frac{3}{4}$–1 poll. lata, integerrima, apice longe attenuata, basi cuneata, glabra, supra subnitida costa subplana nervis primariis inconspicuis, infra pallidiora costa brunnea elevata sulcata, nervis primariis lateralibus utrinque circiter 12 prominulis intra margines curvatis anastomosantibus venis tenuibus obscuris connexis; petioli 6 lin. longi, glabri, supra plani. *Flores* desunt. *Fructus* maturi in ramulis validis glabris subterminales, foliis breviores, 2–3 dissiti. *Cupula* globosa, apice leviter depressa, basi brevissime attenuata, incrassata, 8 lin. longa, 7 lin. diametro, glandem fere tegens, extus paullo furfuracea; squamæ inferiores omnino concretæ, superiores adpressæ, incurvæ, acutæ. *Glans* depresso-globosa, parum umbonata, apiculo cupulam non superante.

FORMOSA: South Cape (*A. Henry*, 1254!). Herb. Kew.

Closely allied to *Q. truncata*, King, but differing in foliage, and in having the fruits quite free from one another.

3. Quercus attenuata, *Skan*, n. sp.

Quercus Eyrei, *Hance in Journ. Bot.* 1884, p. 229, non *Champion*.

HONGKONG: Happy Valley woods (*Ford*!). Mus. Brit.; Herb. Kew.

Dr. Hance published a description of this plant in the belief that it was *Q. Eyrei*, Champ.; but the longer petioles, and the entire leaves with a less prominent venation, clearly distinguish it from Champion's species.

4. Quercus (§ Cyclobalanopsis) Augustinii, *Skan*, n. sp.

Frutex 10 ped. altus (*Henry*). *Ramuli* juniores paullo sulcati, glabri, purpureo-brunnei, sparse griseo-punctati. *Folia* petiolata, ovato-lanceolata vel oblonga, 3–5 poll. longa, 1–2 poll. lata, apice longe acuminata, basi distincte cuneata, integerrima vel sursum minute et obscurissime serrata, marginibus paullo revolutis, glaberrima, supra nitida, lutescentia, nervis conspicue elevatis, infra subænea, obscure glauca, costa lutescente plana, nervis primariis lateralibus utrinque circiter 12 sub angulo 60° egressis tenuibus inconspicuis intra margines curvatis anastomosantibus; petioli 3–4 lin. longi. *Amenta* masculina desunt. *Spicæ* femininæ in axillis foliorum superiorum solitariæ, patentes, foliis multo breviores; pedunculi tenues, glabri, sulcati, floribus paucis dissitis; styli 3, divergentes, capitati. *Cupula* 6 lin. diametro, 3 lin. longa, intus fulvo-sericea, extus subtiliter pubescens, brunnea; squamæ lateraliter concretæ, in annulos 5, inferiores integros, superiores crenulatos dispositæ. *Glans* deest.

YUNNAN: Mengtze, at 5000 feet (*A. Henry*, 11430!). Herb. Kew.

Allied to *Quercus glauca*, Thunb., but easily distinguished by the practically entire, less glaucous leaves, which are distinctly cuneate at the base and present marked differences in venation. The cupules are also distinct.

5. Quercus (§ Lepidobalanus) Baronii, *Skan*, n. sp.

Ramuli juniores tenues, teretes, cito glabrescentes. *Folia* lanceolata, ovato-lanceolata vel ovata, 1–2 poll. longa, 5–10 lin. lata, apice sensim acuta, basi rotunda, tenuiter pauciserrata, utrinque (basi costa dense stellato-hirsuta excepta), sparse stellato-hirsuta, sæpe cito glabrescentia, supra nervis vix elevatis, infra prominulis, nervis primariis lateralibus utrinque circiter 6 sub angulo 50° egressis margines attingentibus; petioli 2–4 lin. longi, sæpe dense stellato-hirsuti. *Flores* desunt. *Fructus* solitarii vel 2–3, nunc sessiles, nunc breviter pedunculati. *Cupula* circiter 6 lin. diametro, 5 lin. longa, utrinque hirsuta; squamæ subulatæ, reflexæ. *Glans* obovoidea, basi glabra excepta sericea, abrupte apiculata, cupulam paullo superans.

NORTH SHENSI: Kinquasan, Kokonsan near Zulu, etc. (*Giraldi*!). Herb. Florent.; Herb. Kew.

Specimens of this species, which appears to be most closely allied to *Quercus calliprinos*, Webb, were included in a collection of Cupuliferæ sent to Kew for examination by Dr. E. Baroni of Florence.

6. **Quercus** (§ **Pasania**) **brevicaudata**, *Skan*, n. sp.

Ramuli juniores angulati, glabri. *Folia* petiolata, oblongo-elliptica, circiter 4½ poll. longa, 2 poll. lata, glabra, apice abrupte acuminata, basi rotundata, integra vel apicem versus obscure undulato-serrata, supra nervis planis, infra costa valde elevata, nervis primariis lateralibus utrinque 9 sub angulo 60° egressis prominulis intra margines curvatis anastomosantibus, venulis tenuibus vix elevatis; petioli subtenues, 14 lin. longi. *Flores* desunt. *Fructus* secus pedunculum crassum foliis paullo breviorem dense dispositi. *Cupula* 4 lin. longa, 10 lin. diametro, intus pallide rubra, leviter glauca, extus griseo-tomentosa; squamæ latæ, minute apiculatæ, arcte adpressæ, circiter 10-seriatæ. *Glans* 11 lin. longa, 9 lin. diametro, nitidissima, brevissime apiculata; cicatrix valde depressa.

Formosa: South Cape (*A. Henry*, 1368 !). Herb. Kew.

This is chiefly distinguishable from *Quercus spicata*, Smith, by the leaves, which are rounded at the base and have rather long, slender petioles.

7. **Quercus Bungeana**, *F. B. Forbes in Journ. Bot.* 1884, pp. 83, 85; *Franchet, Pl. David.* i. p. 275, et *in Journ. de Bot.* 1899, p. 154; *Kanitz, Pl. Exped. Széch.* p. 57.

Quercus chinensis, *Bunge, Enum. Pl. Chin.* p. 61; *DC. Prod.* xvi. 2, p. 50, non *Abel.*

Quercus acutissima, *Carruthers in Journ. Linn. Soc.* vi. (1861) p. 33.

Quercus serrata, *Thunb.*, var. chinensis, *Wenzig in Jahrb. Bot. Gart. Berlin,* iv. p. 221.

China: without locality (*Bunge* !); Chihli: near Peking (*Bushell* ! *Skatschkoff* ! *Bretschneider* !); Hupeh: Nanto and mountains to the northward, Patung (*A. Henry*, 426, 1956, 2291, 2877 !); Shensi: various localites (*Giraldi* !); Szechuen: near Tchenkeoutin (*Farges* !); Yunnan: Mengtze (*A. Henry*, 9913, 9913 A !), and various localities (*Delavay* !); Corea: Chemulpo (*Carles*, 211 !). Mus. Brit.; Mus. Paris.; Herb. Florent.; Herb. Kew.

Japan.

8. **Quercus calathiformis**, *Skan*, n. sp.

Arbor 10–20 ped. alta (*Henry*). *Ramuli* juniores angulati, subtiliter pubescentes. *Folia* petiolata, oblonga, 5–8 poll. longa, 2¼–3¼ poll. lata, apice obtusa vel paullo emarginata, basi cuneata, dentata, dentibus remotis parvis incurvis, glabra vel infra ad nervos primarios sparsissime hirsuta, supra nitida et interdum lutescentia, costa et nervis primariis lateralibus utrinque 15–20 sub angulo 60° egressis, infra valde elevatis venis tenuibus paullo conspicuis. *Amenta* masculina simplicia vel ramosa, in axillis foliorum superiorum disposita, folia interdum superantia; rhachis angulata, subtiliter pubescens, floribus in glomerulis dissitis. *Perianthium* 6-lobum, utrinque intus præsertim hirsutum; lobi obtusi. *Stamina* circiter 12, exserta; antheræ globosæ, glabræ. *Ovarii* rudimentum conspicuum, albo-tomentosum. *Fructus* secus pedunculum strictum teretem albo-punctatum dissiti. *Cupula* matura fragilis, 4½ lin. diametro, 3 lin. longa, intus sericea, extus flavo-tomentosa; squamæ adpressæ, 5–6-seriatæ, basi omnino concretæ, apice subacutæ *Glans* ellipsoidea, 5 lin. longa, castanea, apice albo- vel flavo-sericea.

YUNNAN: Mengtze, at 4500 feet (*A. Henry*, 9070, 9070 A–B!). Herb. Kew.

Upper Burma.

In foliage, male flowers, and spikes of young fruits this species closely resembles *Quercus fissa*, Champ., but the mature cupule does not completely inclose the acorn and never ruptures to liberate it.

9. **Quercus Carlesii,** *Hemsl. in Hook. Ic. Plant.* t. 2591.

FOKIEN: Kushan Temple, Foochow (*Carles*!). Herb. Kew.

10. **Quercus Championi,** *Benth. in Hook. Journ. Bot.* vi. 1854, p. 113, et *Fl. Hongk.* p. 321; *DC. Prod.* xvi. 2, p. 94; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 231; *Seem. Bot. Voy. 'Herald,'* p. 415, t. 90.

FORMOSA: South Cape (*A. Henry*, 1253, 1993!); HONGKONG (*Champion*, 178! *Wilford*, 372! *Wright*, 465!). Herb. Kew.

11. **Quercus chinensis,** *Abel, Narr. Journ. China*, pp. 165 & 363 cum icone; *Williams, Middle Kingdom*, i. p. 363 (1883); *Forbes in Journ. Bot.* 1884, p. 81; *Franchet, Pl. David.* i. p. 275.

KIANGSI: Poyang Lake (*Staunton* ex *Abel*); SHENSI: Tsingling mountains (*David* ex *Franchet*).

12. **Quercus cleistocarpa,** *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 52; *Franchet in Journ. de Bot.* 1899, p. 157.

Quercus fragifera, *Franchet in Journ. de Bot.* 1899, p. 157.

HUPEH (*A. Henry*, 4924, 6538, 6567!); SZECHUEN: near Tchenkeoutin (*Farges*!). Mus. Paris.; Herb. Kew.

13. **Quercus cornea,** *Lour. Fl. Cochinch.* p. 572; *Benth. in Kew Gard. Misc.* vi. p. 112, et *Fl. Hongk.* p. 322; *DC. Prod.* xvi. 2, p. 90; *Bretschneider, Early Eur. Res.* p. 175; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 239; *Journ. de Bot.* 1890, p. 150; *Seem. Bot. Voy. 'Herald,'* p. 413, t. 87.

Synedrys ossea, *Lindl. Nat. Syst.* ed. 2, p. 441; *Hance in Hook. Journ. Bot.* 1849, p. 175.

S. CHINA (*Seemann*!); HONGKONG (*Champion*, 177! *Naumann* ex *Wenzig*); HAINAN (*B. C. Henry*, 65!). Mus. Brit.; Herb. Kew.

Tonquin, Cochinchina, Borneo, and Java.

The Hainan specimen differs from the type in having broader and thinner leaves; the young fruits are in groups, not solitary; and the mature acorn protrudes farther out of the cupule. It agrees with the specimens from Tonquin.

14. **Quercus cuspidata,** *Thunb. Fl. Jap.* p. 176, et *Ic. Pl. Jap.* dec. 5, t. 7; *Blume, Mus. Bot. Lugd.-Bat.* i. p. 288; *DC. Prod.* xvi. 2, p. 103; *Engl. Bot. Jahrb.* vi. p. 56; *Franch. et Savat. Enum. Pl. Jap.* i. p. 449; *Gard. Chron.* 1879, p. 232; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 237; *Hance in Journ. Bot.* 1887, p. 13; *Sieb. et Zucc. Fl. Jap.* i. p. 8, t. 2.

KIANGSU: Chinkiang and River Yangtse (*Maries*!); KIANGSI: Kiukiang (*Maries*!); FORMOSA (*A. Henry*, 1313!); KWANGTUNG: Pakwan Hills, Canton (*Sampson* ex *Hance*); COREA: Port Hamilton (*Wilford*!); COREAN ARCHIPELAGO (*Oldham*, 749!); LUCHU ARCHIPELAGO (*Wright*, 305! *Döderlein* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

Japan.

15. **Quercus dealbata,** *Hook. f. et Thoms.* ex *Miq. in Ann. Mus. Bot. Lugd.-Bat.* i. p. 107; *DC. Prod.* xvi. 2, p. 85; *Brandis, For. Fl.* p. 489 (in note); *Gamble, Man. Ind. Timb.* p. 380; *Hook. f. Fl. Brit. Ind.* v. p. 609; *King in Ann. Bot. Gard. Calc.* ii. p. 46, t. 40, non *Wall.*, nec *Royle.*

Quercus fenestrata, *Roxb.*, var. dealbata, *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 224.

Quercus callicarpifolia, *Griff. Itin. Notes*, p. 87, no. 1268 in part.

YUNNAN: Mengtze, at 5000–6000 feet (*Hancock*, 409! *A. Henry*, 9636 A, 9636 B, 11331!). Herb. Kew.

Khasia Hills.

16. **Quercus Delavayi,** *Franchet in Journ. de Bot.* 1899, p. 158.

YUNNAN: in woods around Tapintze, and other localities (*Delavay*!). Mus. Paris.

17. **Quercus densifolia,** *Abel, Narr. Journ. China*, pp. 165 & 363; *Williams, Middle Kingdom*, i. p. 363 (1883); *Forbes in Journ. Bot.* 1884, p. 81.

KIANGSI: Poyang Lake (*Staunton* ex *Abel*).

18. **Quercus dentata,** *Thunb. Fl. Jap.* p. 177, et *Ic. Pl. Jap.* dec. 5, t. 6; *DC. Prod.* xvi. 2, p. 13; *Hance in Ann. Sc. Nat.* 5^{me} sér. v. p. 243, et *in Journ. Linn. Soc.* x. (1869) p. 482, xiii. (1871) p. 7; *Journ. Bot.* 1873, p. 172; *Franch. et Savat. Enum. Pl. Jap.* i. p. 445; *Franchet, Pl. David.* i. p. 272; *Bretschneider, Chinese Silkworm Trees*, p. 3; *Forbes in Journ. Bot.* 1884, p. 86; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 218.

Quercus obovata, *Bunge, Enum. Pl. Chin.* p. 62; *DC. Prod.* xvi. 2, p. 13; *Carruthers in Journ. Linn. Soc.* vi. (1861) p. 32.

Quercus yunnanensis, *Franchet in Journ. de Bot.* 1899, p. 146.

CHIHLI: Jehol (*David*, 1704!), mountains near Peking (*David*, 2398, ex *Franchet, Bushell*! *Bretschneider*, 694! *Carles*!); SHINGKING: Chienshan mountains (*Taintor*!), Talienwhan (*Urquhart*!), Newchwang (*Meadows*!); SHANTUNG (*Maingay*, 197!); SHENSI: various localities (*Giraldi*!); YUNNAN: Mengtze (*A. Henry*, 9201!), near Tapintze and Mongnichan (*Delavay*!); COREA: Port Hamilton (*Wilford*, 683!); COREAN ARCHIPELAGO: Green Island (*Oldham*, 1090!). Mus. Brit.; Mus. Paris.; Herb. Florent.; Herb. Kew.

Japan.

Var. **McCormickii,** *Skan*; squamis cupulæ erectis multo brevioribus.

Quercus McCormickii, *Carruthers in Journ. Linn. Soc.* vi. (1861) p. 32; *Baker et Moore in Journ. Linn. Soc.* xvii. (1879) p. 387; *DC. Prod.* xvi. 2, p. 14; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 218, *sub* Quercus dentata.

SHINGKING: Talienwhan (*Daniell*!), Chienshan mountains (*Ross*, 492!); COREA: Chemulpo (*Carles*, 213!). Mus. Brit.; Herb. Kew.

Var. oxyloba, *Franchet in Journ. de Bot.* 1899, p. 146.

YUNNAN: near Talongton, above Pienkio (*Delavay*!). Mus. Paris.

19. **Quercus elæagnifolia**, *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 51.

HAINAN (*A. Henry*! *B. C. Henry*, 68!). Herb. Kew.

20. **Quercus Engleriana**, *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 47.

Quercus sutchuenensis, *Franchet in Journ. de Bot.* 1899, p. 150.

HUPEH: Ichang and Patung (*A. Henry*, 967, 2827, 5682 B!); SZECHUEN: Wushan (*A. Henry*, 5682, 5682 A, 5694!), neighbourhood of Tchenkeoutin (*Farges*!). Mus. Paris.; Herb. Kew.

21. **Quercus Eyrei**, *Champ.* ex *Benth. in Hook. Journ. Bot.* vi. 1854, p. 114; *Benth. Fl. Hongk.* p. 320; *DC. Prod.* xvi. 2, p. 105, *non* Q. Eyrei, *Hance in Journ. Bot.* 1884, p. 229.

HONGKONG (*Eyre*!). Herb. Kew.

The specimen described by Hance in *Journ. Bot.* 1884, p. 229, as *Q. Eyrei* is quite distinct from Champion's species, and is here named *Quercus attenuata*, Skan (*suprà*, p. 506).

22. **Quercus Fabri**, *Hance in Journ. Linn. Soc.* x. (1868) p. 202, et *in Journ. Bot.* 1875, p. 362, 1882, p. 294; *Forbes in Journ. Bot.* 1884, p. 86; *Franchet, Pl. David.* i. p. 274.

CHINA, without locality (*Fortune*, A 11?); SHINGKING: Fungwangshan (*Ross*, 191?); KIANGSU: Lake Taihu (*Forbes*!), Shanghai (*Carles*, 367!); CHEKIANG: without locality (*Hickin*!), Tientai mountain (*Faber*, 103!), Ningpo (*Faber*, 309!); KIANGSI: Kiukiang (*David*, 747, ex *Franchet*, *Shearer*!); HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 2294! 2636?); SZECHUEN: Chungking (*Bourne*!); KWANGTUNG: without locality (*Ford*, 357!); COREA: Chemulpo (*Carles*, 24?). Mus. Brit.; Herb. Kew.

23. **Quercus fissa**, *Champ.* ex *Benth. in Hook. Journ. Bot.* vi. 1854, p. 114; *Benth. Fl. Hongk.* p. 320; *Journ. Bot.* 1863, p. 175, et 1875, p. 370; *DC. Prod.* xvi. 2, p. 104; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 238; *Seem. Bot. Voy. 'Herald,'* p. 415, t. 92.

Castanea regia, *Hance in Ann. Sc. Nat.* 4^{me} sér. xviii. p. 230.

S. CHINA, without locality (*Seemann*!); HONGKONG (*Champion*, 175! *Urquhart*, 172! *Wilford*, 141! *Wright*, 467! *Naumann* ex *Wenzig*); HAINAN (*A. Henry*, 18?). Mus. Brit.; Herb. Kew.

24. **Quercus** (§ **Pasania**) **formosana**, *Skan*, n. sp.

Ramuli juniores teretes, rugosuli, glabrescentes, brunnei vel cinereo-brunnei. *Folia* obovata vel elliptica, raro anguste ovata, 1½–2¾ poll. longa, ¾–1 poll. lata, coriacea, glabra, apice rotunda, numquam acuminata, basi cuneata, marginibus revolutis, ad petiolos decurrentia, supra pallide lutea vel brunnea, subnitida costa supra plana vel leviter impressa, infra elevata, nervis primariis lateralibus utrinque 11 planis intra margines bifurcatis anastomosantibus. *Amenta* masculina erecta, foliis breviora; rhachis hirsuta, floribus inferioribus distantibus, superioribus dense aggregatis; perianthium 5–6-lobum, intus glabrum, extus tomentosum, lobis rotundis vel ellipticis obtusis. Stamina 8–12; filamenta perianthio longiora; antheræ globosæ, glabræ. *Ovarii* rudimentum dense albo-tomentosum. *Flores* feminini in spicas erectas inter amenta masculina dispositi, interdum floribus supremis masculinis. *Fructus* juniores ternatim aggregati, proventu in exemplo viso solitarii. *Cupula* adulta subpatelliformis, 6 lin. diametro, 1½ lin. longa; squamæ arcte adpressæ, tomentosæ, basi latæ, apice acuminatæ. *Glans* turbinata, 7 lin. diametro, 6 lin. longa, subnitida, breviter obtuseque apiculata.

FORMOSA: South Cape (*A. Henry*, 1371, 1995!). Herb. Kew.

Though closely related to the Japanese *Quercus glabra*, Thunb., the leaves are never acuminate as in that species, and the primary lateral nerves are less prominent. The male flowers are more densely crowded in shorter spikes, while the cupule and acorn differ considerably.

25. **Quercus** (§ **Lepidobalanus**) **Franchetii**, *Skan*, n. sp.

Arbor 15–20 ped. alta (*Henry*). *Ramuli* juniores teretes, sordide flavo- vel cinereo-tomentosi. *Folia* elliptica, elliptico-lanceolata vel obovata, sæpissime apicem versus latissima, 1¾–3¼ poll. longa, ¾–1¼ poll. lata, apice nunc plus minus acuta nunc obtusa, basi sæpe cuneata, e medio ad apicem glanduloso-serrata, supra glabra, paullo nitida, sublutescentia, infra dense sordide albo- vel flavo-tomentosa, costa elevata, nervis primariis lateralibus utrinque 11 margines attingentibus prominulis; petioli 5–7 lin. longi. *Amenta* masculina fasciculata, in axillis foliorum superiorum disposita, foliis multo breviora; rhachis tomentosa. *Peri-*

anthium 5–7-lobum, extus hirsutum. *Stamina* 5–7; filamenta perianthio paullo longiora; antheræ elliptico-oblongæ, glabræ. *Ovarii* rudimentum minutum. *Flores* feminini desunt. *Cupula* 4½ lin. diametro, 1½ lin. longa, intus hirsuta; squamæ parvæ, adpressæ, brunneæ, ad margines albo-tomentosæ, in seriebus circiter 12 dispositæ. *Glans* obovoidea, 5½ lin. longa, sub apice 4 lin. diametro, supra cupulam adpresse flavo-tomentosa, apice depressa.

Quercus lanuginosa, *Franchet in Journ. de Bot.* 1899, p. 149, non *D. Don.*

YUNNAN: Mengtze, at 6000 feet (*A. Henry*, 9298, 9298 A!). Herb. Kew.

Allied to *Quercus lanuginosa*, D. Don, from which it chiefly differs in being less tomentose, in having smaller leaves usually more cuneate at the base, and acorns depressed at the apex.

26. **Quercus gilva**, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 306; *DC. Prod.* xvi. 2, p. 105; *Franch. et Savat. Enum. Pl. Jap.* i. p. 448; *Forbes in Journ. Bot.* 1884, p. 85; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 233; *Kanitz, Pl. Exped. Széch.* p. 57?

CHEKIANG: Ningpo hills (*Faber*, 308!); CHUSAN ARCHIPELAGO: Pootoo Island (*Carles*, 200!); YUNNAN (*Szechenyi*, 244? ex *Kanitz*), Mengtze (*A. Henry*, 10504, 10504 A!). Mus. Brit.; Herb. Kew.

Japan.

27. **Quercus glandulifera**, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 295; *DC. Prod.* xvi. 2, p. 40; *Kurz in Journ. Bot.* 1873, p. 193; *Moore in Journ. Bot.* 1875, p. 231; *Forbes in Journ. Bot.* 1884, p. 86; *Franchet et Savat. Enum. Pl. Jap.* i. p. 447; *Franchet, Pl. David.* i. p. 274; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 220.

Quercus Griffithii, *Hook. f. et Thoms.*, var. glanduligera, *Franchet in Journ. de Bot.* 1899, p. 149.

SHANTUNG (*Maingay*, 192!), Chefoo (*Faber*, 100!); CHEKIANG: Ningpo (*Everard*!); KIANGSI: Kiukiang (*Shearer*!), Lushan mountains (*Bullock*!); HUPEH: Ichang, Nanto, Patung (*A. Henry*, 1227, 157, 1227, 1419, 1890, 2760, 3906!); SZECHUEN: Yangtze (*Faber*, 215!), near Tchenkeoutin (*Farges*), Wushan (*A. Henry*, 5496!); YUNNAN (*Anderson* ex *Kurz*); COREA: Chemulpo (*Carles*, 20!); COREAN ARCHIPELAGO: Green Island (*Oldham*, 756!). Mus. Brit.; Mus. Paris.; Herb. Kew.

Japan.

28. **Quercus glauca**, *Thunb. Fl. Jap.* p. 175; *DC. Prod.* xvi 2, p. 100; *Franch. et Savat. Enum. Pl. Jap.* i. p. 448; *Masters in Gard. Chron.* 1874, i. p. 632; *Hance in Journ. Bot.* 1875, p. 363, et 1882, p. 294; *Forbes in Journ. Bot.* 1884, p. 86; *Hook. f. Fl. Brit. Ind.* v. p. 604; *Franchet, Pl. David.* i. p. 276; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 233; *Banks, Icon. Select. Kæmpf.* t. 17; *Franchet in Journ. de Bot.* 1899, p. 159; *King in Ann. Bot. Gard. Calc.* ii. p. 29, t. 23.

Quercus annulata, *Smith in Rees's Cyclop.* xxix. no. 22.
Quercus Phullata, *Buch.-Ham. in D. Don, Prodr. Nep.* p. 57.
Quercus dentosa, *Lindl. in Wall. Cat.* no. 2775.
Quercus laxiflora, *Lindl. in Wall. Cat.* no. 2774.

CHINA: without locality (*Reeves*!); CHEKIANG: mountains near Ningpo (*Carles*, 201!); KIANGSI: Lushan hills (*Maries*! *Bullock*, 75!), Kiukiang (*Bullock*!); mountains between KIANGSI and FOKIEN (*David* ex *Franchet*); FOKIEN: Kienning-fu and Foochow (*Carles*!); FORMOSA: (*A. Henry*, 428!); HUPEH: Ichang, Nanto and mountains to the northward, Funghu, Patung (*A. Henry*, 966, 1561! etc.); SZECHUEN: Wushan (*A. Henry*, 5277 A, 7064, 7076!), various localities (*Farges*!); KWANGTUNG: Lienchow River (*B. C. Henry*!); HONGKONG (*Sampson*, 1826!). Mus. Brit.; Mus. Paris.; Herb. Kew.

Himalaya and Japan.

Var. **villosa**, *Skan*, n. var.; foliis infra sparse villosis, venis tertiariis conspicuioribus, cupulæ squamis dense villosis in seriebus 9 crenulatis, glande cupulam vix superante apice paullo pilosa.

YUNNAN: Mengtze (*A. Henry*, 9299, 9299 A!). Herb. Kew.

29. **Quercus Hancei**, *Benth. Fl. Hongk.* p. 322; *Hance in Ann. Sc. Nat.* 4^{me} sér. xviii. p. 230, et *in Journ. Bot.* 1863, p. 180; *DC. Prodr.* xvi. 2, p. 96.

HONGKONG (*Champion*, 494! hb. *Hance*, 1525! *Wilford*! *Wright*, 463!). Mus. Brit.; Herb. Kew.

Hance's specimen differs from the type in having longer and less winged petioles.

30. **Quercus Harlandi**, *Hance in Walp. Ann.* iii. p. 382; *Benth. in Hook. Journ. Bot.* vi. 1854, p. 113, et *Fl. Hongk.* p. 321; *DC. Prod.* xvi. 2, p. 96; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 228; *Seem. Bot. Voy. 'Herald,'* p. 414, t. 89.

SOUTH CHINA: without locality (*Seemann*, 2405!); HONGKONG

(*Champion*, 179! *Ford*! *Wright*, 461, 462, 464! *Naumann* ex *Wenzig*). Mus. Brit.; Herb. Kew.

31. **Quercus Ilex**, *Linn. Sp. Pl.* ed. 1, p. 995; *DC. Prod.* xvi. 2, p. 39; *Brandis, For. Flora*, p. 486; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 200; *Hook. f. Fl. Brit. Ind.* v. p. 602; *King in Ann. Bot. Gard. Calc.* ii. p. 24, t. 17; *Kotschy, Eichen*, t. 38.

Var. **acrodonta**, *Skan*; foliis parvis sæpissime lanceolatis apice acutis supra medium sparse spinuloso-serratis infra persistenter tomentosis, cupulis 2 lin. longis, 4 lin. diametro.

Quercus acrodonta, *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 48.

Quercus Ilex, *Linn.*, var. phillyræoides, *Franchet in Journ. de Bot.* 1899, p. 152 partim.

Hupeh: Ichang and neighbourhood (*A. Henry*, 2954, 3425, 3425 A–B, 7619!); North Shensi: Mt. Lunsanhuo (*Giraldi*!). Herb. Florent.; Herb. Kew.

Var. **phillyræoides**, *Franchet in Journ. de Bot.* 1899, p. 152.

Quercus phillyræoides, *A. Gray in Mem. Amer. Acad.* new series, vi. p. 406; *DC. Prod.* xvi. 2, p. 39; *Masters in Gard. Chron.* 1874, p. 632; *Franch. et Savat. Enum. Pl. Jap.* i. p. 446; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 220.

Szechuen: Mougmien, near Tachienlou (*Soulié*!), Kymin, near Tchenkeoutin, and on Moung Moungki (*Farges*!); Yunnan: various localities (*Delavay*!); Luchu Archipelago (*Wright*, 306!). Mus. Paris.; Herb. Kew.

Japan.

Quercus phillyræoides, Gray ?, Franchet, Pl. David. i. p. 275, appears to be *Q. Ilex*, Linn., var. *acrodonta*, Skan.

Var. **rufescens**, *Franchet in Journ. de Bot.* 1899, p. 151.

Szechuen: near Tachienlou (*Prince Henry of Orleans*! *Mussot*! *Pratt*, 201!), Tongolo (*Soulié*!); Yunnan: Heechanmen and on Koutoui (*Delavay*!). Mus. Paris.; Herb. Kew.

Var. **spinosa**, *Franchet in Journ. de Bot.* 1899, p. 152.

Quercus spinosa, *A. David, in Franchet, Pl. David.* i. p. 274.

Quercus bullata, *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 48.

Quercus Ilex, *Linn.*, var. bullata, *Franchet in Journ. de Bot.* 1899, p. 152.

Quercus ilicioides, *A. David* ex *Bretschn. Hist. Eur. Bot. Disc.* p. 850?

Hupeh: Fang and Patung districts (*A. Henry*, 5981, 5981 A, 5981 C!); SHENSI: various localities (*Giraldi*!), Tsinling mountains (*David* ex *Franchet*); KANSUH: near Tshagon (*Potanin*!); SZECHUEN: Wushan (*A. Henry*, 5981 B!), on Heoupin, near Tchenkeoutin (*Farges*!). Mus. Paris.; Herb. Florent.; Herb. Kew.

32. **Quercus Irwinii**, *Hance in Ann. Sc. Nat.* 4me sér. xviii. p. 229; *DC. Prod.* xvi. 2, p. 84; *Journ. Linn. Soc.* xiii. (1872) p. 124; *Journ. Bot.* 1887, p. 13.

Quercus thalassica, *Hance*, var. Irwinii, *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 223.

KWANGTUNG: Taimoshan (*Westland* ex *Hance*); HONGKONG (*Irwin*!). Mus. Brit.; Herb. Kew.

33. **Quercus iteaphylla**, *Hance in Journ. Bot.* 1884, p. 229.

HONGKONG (*Ford*!). Mus. Brit.; Herb. Kew.

34. **Quercus lineata**, *Blume, Bijdr.* p. 523; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 232; *Hook. f. Fl. Brit. Ind.* v. p. 605; *King in Ann. Bot. Gard. Calc.* ii. p. 32, t. 26, non *Miq.*

Var. **oxyodon**, *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 232; *Hook. f. Fl. Brit. Ind.* v. p. 605; *King in Ann. Bot. Gard. Calc.* ii. p. 33, t. 26. fig. 3.

Quercus oxyodon, *Miq. Ann. Mus. Bot. Lugd.-Bat.* i. p. 114; *DC. Prodr.* xvi. 2, p. 98.

Quercus glauca, *Thunb.*, var. lineata, *Franchet in Journ. de Bot.* 1899, p 159.

SZECHUEN: North Wushan (*A. Henry*, 5632 F!), around Tchenkeoutin (*Farges*!). Mus. Paris.; Herb. Kew.

India.

Var. **Fargesii**, *Skan*, n. var.; foliis 5–6 poll. longis, glande quam cupula circiter 1 lin. longiore.

Quercus Fargesii, *Franchet in Journ. de Bot.* 1899, p. 158.

HUPEH: Fang and Chienshih (*A. Henry*, 5632 C, 5632 E!); SZECHUEN: near Tchenkeoutin, at 4590 ft. (*Farges*!). Mus. Paris.; Herb. Kew.

Var. **grandifolia**, *Skan*, n. var.; foliis usque ad 9½ poll. longis, fructibus parvis ad ramulos breves dense dispositis, glande quam cupula 2–3 lin. longiore.

HUPEH: Ichang (*A. Henry*, 554!). Herb. Kew.

35. **Quercus litseifolia**, *Hance in Journ. Bot.* 1884, p. 228.
HAINAN (*B. C. Henry*, hb. *Hance*, 22209!). Mus. Brit.

36. **Quercus** (§ **Pasania**) **Lycoperdon**, *Skan*, n. sp.
Arbor 25 ped. alta (*Henry*). *Ramuli* juniores sulcati, purpurei, glabri. *Folia* petiolata, elliptico-oblonga vel elliptico-lanceolata, integerrima, 2¾–4 poll. longa, 1–1½ poll. lata, apice breviter acuminata, basi cuneata, ad petiolum decurrentia, marginibus revolutis, supra glaberrima, nitida, lutescentia, nervis impressis, infra cinereo-lepidota, costa paullo elevata, nervis primariis lateralibus utrinque 10 intra margines bifurcatis anastomosantibus, venis numerosis planis connexis; petioli 6–8 lin. longi, supra sulcati. *Flores* desunt. *Fructus* secus pedunculum crassum ternati; unicus tantum maturans, 2 alii steriles repressi, parvi vel minuti, ad cupulæ maturæ basin. *Cupula* adulta valde incrassata, 1¾ poll. diametro, ¾ poll. longa, intus supra cicatricem adpresse fulvo-tomentosa, extus rugosa, sordide tomentosa, squamis adpressis subseriatis obtecta. *Glans* depresso-turbinata, 2 poll. diametro, 1 poll. longa, supra adpresse fulvo-sericea, passim glabrescens, umbonata.

YUNNAN: Mengtze at 7000 feet (*A. Henry*, 9069!). Herb. Kew.

This species resembles *Quercus pachyphylla*, Kurz, but it is easily distinguished from it by the very broad-topped pubescent acorn. It differs from *Q. cornea*, Lour., in the leaves and in the shallower, less symmetrical cupules.

37. **Quercus mongolica**, *Fisch.* ex *Turcz. in Bull. Soc. Nat. Mosc.* 1838, p. 101, et xxvii. pt. 1, p. 409; *Carruthers in Journ. Linn. Soc.* vi. (1861) p. 32; *DC. Prod.* xvi. 2, p. 14; *Hance in Journ. Linn. Soc.* x. (1869) p. 482, et xiii. (1873) p. 7; *Forbes in Journ. Bot.* 1884, p. 86; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 218; *Kanitz, Pl. Exped. Széch.* p. 56; *Act. Hort. Petrop.* xi. p. 365, et xii. p. 388.

Quercus sessiliflora, *Salisb.*, var. mongolica, *Franchet, Pl. David.* i. p. 273.

Quercus Robur, *Pallas, Fl. Ross.* ii. p. 3.

CHIHLI: near Peking (*Bushell*!), Jehol (*David*, 1732!), Pehwashan (*David* ex *Franchet*); SHINGKING: Chienshan mountains (*Taintor*!), Newchwang (*Meadows*!); SHANTUNG: without locality (*Maingay*, 196!). Mus. Brit.; Herb. Kew.

Dahuria, Amur, Mongolia, Mandshuria.

38. **Quercus Moulei,** *Hance in Journ. Bot.* 1875, p. 363.

CHEKIANG: Hangchow (*Moule*). Mus. Brit.

39. **Quercus Naiadarum,** *Hance in Journ. Bot.* 1884, p. 227.

Quercus neriifolia, *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 51.

HAINAN (*A. Henry*, 8142, 8739! *B. C. Henry*, hb. *Hance*, 22199!). Mus. Brit.; Herb. Kew.

40. **Quercus obscura,** *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 47.

HUPEH (*A. Henry*, 6167!). Herb. Kew.

41. **Quercus pachyloma,** *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 54.

FOKIEN: Foochow, Mount Kushan (*Warburg*, 5835, ex *Seemen*); FORMOSA: South Cape (*A. Henry*, 1367 ex descriptione). Herb. Kew.

42. **Quercus polystachya,** *Wall. Cat.* 2789; *DC. Prod.* xvi. 2, p. 107; *Kurz, For. Fl.* ii. p. 485; *Hook. f. Fl. Brit. Ind.* v. p. 610; *King in Ann. Bot. Gard. Calc.* ii. p. 50, t. 44.

Quercus bancana, *Kurz, For. Fl* ii. p. 485, *non Scheffer*.

YUNNAN: Mengtze (*A. Henry*, 9636, 10520, 11434, 11434 A!). Herb. Kew.

The Yunnan specimens differ from the type in having fewer and stouter flower-spikes.

43. **Quercus salicina,** *Blume, Mus. Bot. Lugd.-Bat.* i. p. 305; *Benth. Fl. Hongk.* p. 321; *DC. Prod.* xvi. 2, p. 100; *Miq. Ann. Mus. Bot. Lugd.-Bat.* i. p. 116; *Hance in Journ. Bot* 1875, p. 364; *Forbes in Journ. Bot.* 1884, p. 85; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 231; *Seem. Bot. Voy. 'Herald,'* p. 415, t. 91.

Quercus bambusæfolia, *Hance* ex *Miq. Ann. Mus. Bot. Lugd.-Bat.* i. p. 116, et *in Journ. Bot.* 1875, p. 364, non *Fortune*, nec *Masters*.

CHINA: without locality (*Millett*!); S. CHINA (*Seemann*, 2407!); HONGKONG (*Champion*, 327! *Wilford*, 142! *Wright Naumann* ex *Wenzig*). Mus. Brit.; Herb. Kew.

Japan.

44. **Quercus sclerophylla,** *Lindl. in Lindl. et Paxt. Fl. Gard.* i. p. 59, fig. 37; *Walp. Ann.* iii. p. 384; *Masters in Gard. Chron.* 1874, i. p. 632; *Hance in Journ. Bot.* 1874, p. 242, 1875, p. 366, et 1882, p. 294; *Forbes in Journ. Bot.* 1884, p. 86.

Quercus cuspidata, *Thunb.*, var. sinensis, *DC. Prod.* xvi. 2, p. 103; *Hance in Journ. Bot.* 1875, p. 366.

CHINA: without locality (*Fortune*, 40!); CHEKIANG: without locality (*Hickin*!), Ningpo hills (*Faber*, 310 partim!); Tientai mountain (*Faber*, 102!); KIANGSI: Kiukiang (*Maries*! *Bullock*!): HUPEH: Ichang, Nanto and mountains to the northward (*A. Henry*, 2964, 3218, 3218 A!); HONGKONG (hb. *Hance*, 367! *Urquhart*, 162, 264! cult.). Mus. Brit.; Herb. Kew.

45. **Quercus semecarpifolia,** *Smith in Rees's Cyclop.* xxix. n. 20; *Wall. Pl. As. Rar.* ii. p. 56, t. 174; *DC. Prod.* xvi. 2, p. 15; *Brandis, For. Fl.* p. 479, t. 64; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 219; *Kanitz, Pl. Exped. Széch.* p. 56; *Hook. f. Fl. Brit. Ind.* v. p. 601; *Franchet in Journ. de Bot.* 1899, p. 150; *King in Ann. Bot. Gard. Calc.* ii. p. 21, t. 15 A.

SOUTH-WEST CHINA: descent from Hsi Te Hsien (*Bourne*, 28!); SZECHUEN (*Szechenyi*, 235, ex *Kanitz*); YUNNAN (*Szechenyi*, 269, ex *Kanitz*): various localities (*Delavay*!). Mus. Paris.; Herb. Kew.

Himalaya.

Var. **glabra**, *Franchet in Journ. de Bot.* 1899, p. 151.

YUNNAN: various localities (*Delavay*!), Mengtze (*A. Henry*, 10217!). Mus. Paris.; Herb. Kew.

46. **Quercus serrata,** *Thunb. Fl. Jap.* p. 176; *DC. Prod.* xvi. 2, p. 50; *Debeaux, Fl. Chefoo*, p. 128; *Carruthers in Journ. Linn. Soc.* vi. (1861) p. 32; *Forbes in Journ. Bot.* 1884, p. 86; *Franch. et Savat. Enum. Pl. Jap.* i. p. 447; *Franch. Pl. David.* i. p. 275, et *in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 254; *Hance in Journ. Linn. Soc.* xiii. (1871) p. 8; *Bretschn. Early Eur. Res.* pp. 61 et 121, et *Chinese Silkworm Trees*, pp. 4–5; *Hook. f. Fl. Brit. Ind.* v. p. 601; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 221; *Kanitz, Fl. Exped. Széch.* p. 57; *King in Ann. Bot. Gard. Calc.* ii. p. 22, t. 16.

CHINA: Kaichow to Kinchow (*Ross*, 272!); SHINGKING: near Newchwang (*Meadows*!); SHANTUNG (*Maingay*, 195!); KIANGSU: Shanghai (*Carles*, 198!); EAST KIANGSI (*David* ex *Franchet*);

SZECHUEN: Hokiang (*Faber*, 216!); HAINAN (*B.C. Henry*, 62, 63!). Mus. Brit.; Herb. Kew.

Himalaya, Shan hills, Japan.

47. **Quercus sessilifolia**, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 305; *Franch. et Savat. Enum. Pl. Jap.* i. p. 449, et ii. p. 498; *Franch. Pl. David.* i. p. 276.

KIANGSI: Kiukiang (*David* ex *Franchet*).

Japan.

48. **Quercus silvicolarum**, *Hance in Journ. Bot.* 1884, p. 229.

HAINAN (*B. C. Henry*, hb. *Hance*, 22215!). Mus. Brit.

49. **Quercus spathulata**, *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 49.

HUPEH: Nanto, Changyang, Hsingshan (*A. Henry*, 6359, 6359 A–C!). Herb. Kew.

50. **Quercus spicata**, *Smith in Rees's Cyclop.* xxix. n. 12; *DC. Prod.* xvi. 2, p. 85; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 224; *Hook. f. Fl. Brit. Ind.* v. p. 609; *Franchet in Journ. de Bot.* 1899, p. 155; *King in Ann. Bot. Gard. Calc.* ii. p. 47, tt. 41–43; *Wall. Pl. As. Rar.* i. p. 40, t. 46.

Quercus Henryi, *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 50.

HUPEH: Chienshih (*A. Henry*, 6023!); SZECHUEN: North Wushan (*A. Henry*, 7030, 7030 A!), Tchenkeoutin (*Farges*!); WEST YUNNAN: various localities (*Delavay*!). Mus. Paris.; Herb. Kew.

51. **Quercus synbalanos**, *Hance in Journ. Bot.* 1884, p. 228.

HONGKONG (*Ford*!). Mus. Brit.; Herb. Kew.

The specimen collected near Aberdeen Road, in July 1884, differs from the type in having longer and narrower leaves.

52. **Quercus thalassica**, *Hance in Hook. Journ. Bot.* i. 1849, p. 176, et *in Walp. Ann.* iii. p. 382; *Benth. Fl. Hongk.* p. 321; *DC. Prod.* xvi. 2, p. 84; *Gard. Chron.* 1874, i. p. 632; *Franch. et Savat. Enum. Pl. Jap.* i. p. 447; *Journ. Bot.* 1884, p. 86; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 222.

Quercus inversa, *Lindl. in Lindl. et Paxt. Fl. Gard.* i. p. 58; *Seem. Bot. Voy. 'Herald,'* p. 414, t. 88

Quercus reversa, *Lindl.? Benth. in Hook. Journ. Bot.* vi. 1854, p. 112.

Quercus Sieboldiana, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 290.

Kwangtung: without locality (*Ford* 358!), Lantao Island (*Ford*, 43!); Hongkong (*Wright*, 460! *Champion*, 493! *Seemann*!). Mus. Brit.; Herb. Kew.

Japan.

Var. **vestita**, *Franchet in Journ. de Bot.* 1899, p. 154.

Yunnan: in woods around Tapintze (*Delavay*!). Mus. Paris.

53. **Quercus urticæfolia**, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 296; *DC. Prod.* xvi. 2, p. 16; *Walp. Ann.* iii. p. 384; *Franch. et Savat. Enum. Pl. Jap.* i. p. 445; *Wenzig in Jahrb. Bot. Gart. Berlin*, iv. p. 219.

Quercus canescens, *Blume*, var. urticæfolia, *Miq. Ann. Mus. Bot. Lugd.-Bat.* i. p. 105.

China: without locality (ex *Blume*).

Japan.

54. **Quercus uvariifolia**, *Hance in Journ. Bot.* 1884, p. 227.

Kiangsi: River Suikong (*B. C. Henry*); Kwangtung: Tanhashan (*B. C. Henry*), Lofaushan (*Ford*!). Mus. Brit.; Herb. Kew.

55. **Quercus variolosa**, *Franchet in Journ. de Bot.* 1899, p. 156.

Yunnan: in woods near Maeulchan, above Gnoukay, at about 8000 feet, and other localities (*Delavay*!). Mus. Paris.

56. **Quercus Vibrayeana**, *Franch. et Savat. Enum. Pl. Jap.* i. p. 449, et ii. p. 498; *Forbes in Journ. Bot.* 1884, pp. 85 et 86.

Quercus bambusifolia, *Fortune in Gard. Chron.* 1860, p. 170, non *Hance*, nec *Masters in Gard. Chron.* 1874, i. p. 632.

Chekiang Hills (*Fortune*!). Mus. Brit.; Herb. Kew.

Japan.

57. **Quercus** sp. verisimiliter Q. *spicata*, Smith. Specimen spicis femininis immaturis.

Hupeh: Chienshih (*A. Henry*, 5805, 5805 A!). Herb. Kew.

58. **Quercus** sp. Q. *Hanceo*, Benth. affinis. Specimen immaturum.

Yunnan: Mengtze (*A. Henry*, 9458, 9458 A!). Herb. Kew.

1. **Castanopsis caudata**, *Franchet, Pl. David.* i. p. 277; et *in Journ. de Bot.* 1899, p. 196.

Kiangsi: Kiukiang (*David*, 859, ex *Franchet*).

2. **Castanopsis chinensis**, *Hance in Journ. Linn. Soc.* x. (1868) p. 201, et *in Journ. Bot.* 1874, p. 243 ; *Franchet in Journ. de Bot.* 1899, p. 194.

Fagus Castanea, *Lour. Fl. Cochinch.* p. 571.

Castanea chinensis, *Spreng. Syst.* iii. p. 856.

YUNNAN : near Tapintze (*Delavay*, 4013 !) ; KWANGTUNG : without locality (*Ford*, 356 !), Tsingyune Pass, North River, and hills near Canton (*Sampson et Hance*, hb. *Hance*, 13785 ! hb. *Sampson*, 1088 !). Mus. Brit. ; Mus. Paris. ; Herb. Kew.

Cochinchina.

3. **Castanopsis concinna**, *A. DC. in Journ. Bot.* 1863, p. 182, et *in DC. Prod.* xvi. 2, p. 110 ; *Hance in Journ. Linn. Soc.* xiii. (1872) p. 124.

Castanea concinna, *Champ. in Kew Gard. Misc.* vi. (1854) p. 115 ; *Benth. Fl. Hongk.* p. 319 ; *Seem. Bot. Voy. 'Herald,'* p. 413, t. 86.

SOUTH CHINA (*Seemann*, 2409 !) ; HONGKONG (*Champion*, 495 !). Mus. Brit. ; Herb. Kew.

4. **Castanopsis Delavayi**, *Franchet in Journ. de Bot.* 1899, p. 194.

YUNNAN : Piiouse and Tapintze (*Delavay* !), Mengtze (*A. Henry*, 9457, 9457 A–C ! B *Hancock*, 274 !). Mus. Paris. ; Herb. Kew.

5. **Castanopsis Fabri**, *Hance in Journ. Bot.* 1884, p. 230.

KWANGTUNG : Lofaushan (*Faber* ex *Hance*). Mus. Brit.

6. **Castanopsis Fargesii**, *Franchet in Journ. de Bot.* 1899, p. 195.

SZECHUEN : Tchenkeoutin (*Farges* !). Mus. Paris.

7. **Castanopsis Fordii**, *Hance in Journ. Bot.* 1884, p. 230.

FOKIEN : Foochow mountains (*Carles*, 595 !) ; KWANGTUNG : Lofaushan (*Ford* !). Mus. Brit. ; Herb. Kew.

8. **Castanopsis Henryi**, *Skan*, n. sp.

Arbor 20–30 ped. alta (*Henry*). *Ramuli* juniores glaberrimi, purpurei, albo-punctati. *Folia* ovato-lanceolata vel oblonga, 3½–5 poll. longa, 1½–2¼ poll. lata, utrinque glaberrima, basi rotunda vel paullo cuneata, apice sensim acuminata, serrata, dentibus remotis setaceis 1 lin. longis, costa et nervis primariis lateralibus utrinque circiter 14 infra præsertim elevatis, venulis dense reticulatis prominulis ; petioli 7–8 lin. longi, supra sulcati. *Flores* desunt. *Fructus* solitarius, ¾ poll. longus, breviter pedunculatus, in axillis foliorum superiorum dispositus ; involu-

crum subtiliter velutinum, echinatum, aculeis validis e basi communi undique patentibus 2½–3 lin. longis, præter apicem glabrum tomentellis. *Glans* solitaria, ovato-turbinata, circum apicem sericea, infra glabra, castanea; styli 9.

Hupeh: Patung District (*A. Henry*, 125, 2878!). Herb. Kew.

A well marked species in which the solitary nut bears as many as nine styles. Its leaves closely resemble those of *Quercus serrata*.

9. **Castanopsis Hystrix**, *A. DC. in Journ. Bot.* 1863, p. 182, et *in DC. Prod.* xvi. 2, p. 111; *Miq. Ann. Mus. Bot. Lugd.-Bat.* i. p. 119; *Hook. f. Fl. Brit. Ind.* v. p. 620; *King in Ann. Bot. Gard. Calc.* ii. p. 95, t. 84.

Castanea Hystrix, *Hook. f. et Thoms. MS.*

Castanea rufescens, *Hook. f. et Thoms. MS.*

Yunnan: Mengtze (*A. Henry*, 11313!). Herb. Kew.

Sikkim Himalaya, Khasia hills, and Perak.

10. **Castanopsis jucunda**, *Hance in Journ. Bot.* 1884, p. 230.

Kwangtung: Tanhashan mountains (*B. C. Henry*, hb. *Hance*, 22232). Mus. Brit.

11. **Castanopsis Lamontii**, *Hance in Journ. Bot.* 1875, p. 368.

Hongkong: Wongneichung (*Lamont*, hb. *Hance*, 18992!). Mus. Brit.; Herb. Kew.

12. **Castanopsis orthacantha**, *Franchet in Journ. de Bot.* 1899, p. 194.

Yunnan: Maokoutchan, above Tapintze (*Delavay*!). Mus. Paris.

13. **Castanopsis tibetana**, *Hance in Journ. Bot.* 1875, p. 367.

Chekiang: near Hangchow (*Moule* ex *Hance*); Kiangsi: Kiukiang (*Maries*!); Fokien: Kienningfu (*Carles*!). Mus. Brit.; Herb. Kew.

14. **Castanopsis tribuloides**, *A. DC. in Journ. Bot.* 1863, p. 182, et *in DC. Prodr.* xvi. 2, p. 111; *King in Ann. Bot. Gard. Calc.* ii. p. 102, t. 94.

Var. **formosana**, *Skan*, n. var.; foliis ovato-lanceolatis vel ovato-oblongis valde serratis, apice acuminatis, supra glabris, infra obscure lepidotis, amentis masculinis paniculatis gracilibus, rhachi glabra vel sparse pilosa, fructu ferrugineo-tomentoso, aculeis validis 5 lin. longis, glande solitaria depresso-globosa pilis ferrugineis dense vestita.

Formosa: Bankingsing mountains and South Cape (*A. Henry*, 60, 1641, 1710!). Herb. Kew.

1. **Castanea sativa**, *Mill. Gard. Dict.* ed. 8.

Castanea vulgaris, *Lam. Encycl. Bot.* i. p. 708; *DC. Prod.* xvi. 2, p. 114; *Hance in Journ. Bot.* 1872, p. 69; *Debeaux, Fl. Tchef.* p. 130, et *Fl. Tientsin.* p. 41; *Franchet in Mém. Soc. Sc. Cherbourg*, xxiv. p. 254, et *in Journ. de Bot.* 1899, p. 196; *Palibin in Act. Hort. Petrop.* xiv. p. 139.

Castanea vulgaris, *Lam.*, var. japonica, *DC. Prod.* xvi. 2, p. 115; *Hance in Journ. Bot.* 1874, p. 262; *Franchet et Savat. Enum. Pl. Jap.* i. p. 450, et ii. p. 501; *Franchet, Pl. David.* i. p. 277.

Castanea japonica, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 284; *Walp. Ann.* iii. p. 389.

Castanea chinensis, *Hassk. Hort. Bog.* p. 73, non *Spreng.*

Castanea? mollissima, *Blume, Mus. Bot. Lugd.-Bat.* i. p. 286.

Castanea vesca, *Gaertn. Fruct.* i. p. 181, t. 37; *Bunge, Enum. Pl. Chin. Bor.* p. 62.

Fagus Castanea, *Linn. Sp. Pl.* ed. 2, p. 1416.

CHIHLI: Peking (*Bretschneider*, 688!); CHEKIANG: Ningpo hills (*Faber*!); KIANGSI (*David* ex *Franchet*); HUPEH: various localities (*A. Henry*, 70, 124, 493! etc.); SHENSI: various localities (*Giraldi*!); SZECHUEN: mountains of Moungmoungky (ex *Franchet*); KWEICHAU (*Faber*, 997!); YUNNAN (*Anderson*!), Mengtze (*A. Henry*, 10701! cult.?); KWANGTUNG: near Whampoa (hb. *Hance*, 17395! cult.); WEST COREA (*Perry*, 55!). Mus. Brit.; Herb. Florent.; Herb. Kew.

Europe, North Africa, Orient, and Japan.

[*Castanea vulgaris* var. *yunnanensis*, Franchet, in Journ. de Bot. 1899, p. 196, is probably the same as the plant collected by Anderson and Henry in Yunnan, which I do not consider as distinct from *C. sativa*.]

1. **Fagus sylvatica**, *Linn. Sp. Pl.* ed. 1, p. 998; *DC. Prod.* xvi. 2, p. 118.

Var. **longipes**, *Oliver in Hook. Ic. Pl.* sub t. 1936 (F. sinensis, *Oliver*, in tabula); *Franchet in Journ. de Bot.* 1899, p. 90.

Fagus longipetiolata, *O. Seemen in Engl. Bot. Jahrb.* xxiii. Beiblatt 57, p. 56.

HUPEH: South Patung and Chienshih (*A. Henry*, 5334, 5334 A, 7444!), *var.* "bracteolis involucri exterioribus anguste spathulatim dilatatis," Fang District (*A. Henry*, 6793? 6797!); SZECHUEN: near Tchenkeoutin (*Farges* ex *Franchet*); YUNNAN: Mengtze (*A. Henry*, 9027 partim?). Herb. Kew.

Var. **chinensis**, *Franchet in Journ. de Bot.* 1899, p. 201.
SZECHUEN: Tchenkeoutin (*Farges* ex *Franchet*).

128. SALICACEÆ.

(By I. H. Burkill, F.L.S.)

1. **Salix alba**, *Linn. Sp. Pl.* ed. 1, p. 1021; *Anderss. in DC. Prod.* xvi. 2, p. 211; *F. P. Smith, Chinese Materia Med.* p. 232; *Debeaux, Fl. Shangh.* p. 57; *Hook. f. Fl. Brit. Ind.* v. p. 629; *Fauvel in Mém. Soc. Sc. Nat. Cherbourg*, xxii. p. 354.

North China (*Smith*); Kiangsu: Plain of Shanghai, occasionally cultivated (*Debeaux*); Chusan Archipelago (*Cantor* ex *Fauvel* with a query).

Widely spread in Europe and Northern Asia, and (?) cultivated in Northern India.

Both Debeaux and F. P. Smith speak of the use of leaves of this willow in the adulteration of tea, and name it Peh-yang. I have seen no specimens. That the Chinese do prepare willow-leaves for an adulterant of tea is assured from other sources; but it is not clear whether it is this species and this only which is used by them.

2. **Salix babylonica**, *Linn. Sp. Pl.* ed. 1, p. 1017; *Lour. Fl. Cochinch.* p. 609; *Bunge, Enum. Pl. Chin. Bor.* pp. 61, 346; *Griffith, On Dr. Cantor's Collection*, p. 6; *Maxim. Ind. Fl. Pek. in Prim. Fl. Amur.* p. 477; *Anderss. in DC. Prod.* xvi. 2, p. 212; *Hance in Journ. Bot.* 1868, p. 49; *Debeaux, Fl. Shangh.* p. 56, et *Fl. Tchef.* p. 130, et *Fl. Tients.* p. 41; *Fauvel in Mém. Soc. Sc. Nat. Cherbourg*, xxiii. p. 200; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 254; *Baker & S. Moore in Journ. Linn. Soc.* xvii. p. 386; *Bretschn. Early Res.* pp. 14, 30, 50, 175; *Franchet, Pl. David.* i. p. 282; *Potonié in Naturw. Wochenschr.* vii. p. 287; *Bretschn. Hist. Eur. Bot. Disc.* pp. 19, 42, 499.

Chihli: Peking (*Bretschneider*, 700! *Bushell*! *David*, 2380! *Williams* in hb. *Hance*, 12974!), Jehol (*David*, 1691!), Tientsin and sands of the Peiho (*Debeaux*); Shingking: Moukden, Liao river (*Webster*, 85!), Changdien (*Ross*, 157!); Shangtung: Chefoo (*Fauvel*!), Yantai and Kitsensoo, near Chefoo (*Debeaux*); Kiangsu: Shanghai (*Wykeham Perry*! *Maingay*, 318, 377! *Carles*, 363! *Debeaux*); Chekiang: Ningpo, cultivated (*Fauvel*); Chusan Archipelago (*Cantor* ex *Griffith*); Hupeh: Changlo

(*A. Henry*, 6325!), Ichang (*A. Henry*, 1328, 3355!) and without exact locality (*Fortune*, 53! *Piasezki* ex *Maximowicz*); SHENSI (*Piasezki* ex *Maximowicz*); YUNNAN: Yunnansen, in the plain (*Ducloux*, 83!), Mosoyn (*Delavay*!). Mus. Brit.; Herb. Kew.; Mus. Paris.

This species is a native of the temperate parts of China, from which it has been widely spread by man. It is cultivated in Cochinchina. Hance says it is only cultivated in South China. The form with pendent branches now so common in Europe is not the common form of China.

According to Debeaux the Chinese call it Tiao-lieou or Lieou-pi. They make use of both the wood and the wool of the seed.

3. **Salix cantoniensis**, *Hance in Journ. Bot.* 1868, p. 48; *Anderss. in DC. Prod.* xvi. 2, p. 685; *Hance in Journ. Bot.* 1879, p. 15.

KWANGTUNG: Canton river (*Sampson* in hb. *Hance*, 13757!). Mus. Brit.; Herb. Kew.

Flowerless branches would pass for *S. fragilis*, Linn., but with the male catkins (which sex alone has been collected) it would seem nearest to the North American *S. nigra*, Marsh. The lowest flowers on the catkins have 5–7 stamens, while the uppermost have 3 or 2. This Hance failed to observe.

4. **Salix Caprea**, *Linn. Sp. Pl.* ed. 1, p. 1020; *Anderss. in DC. Prod.* xvi. 2, p. 222; *Franchet, Pl. David.* i. p. 283; *Hook. f. Fl. Brit. Ind.* v. p. 629.

COREA: Chemulpo (*Carles*, 23!); SHENSI: Tsingling (*David* ex *Franchet* with a query). Herb. Kew.

Europe and Northern Asia from the Atlantic to the Pacific; also introduced into India. The plant of the East differs in the leaves from that of the West.

A plant, perhaps *Salix Caprea* × *phylicifolia*, but certainly very near *S. Caprea*, has been collected in the province of Chihli at Jehol (*David*, 1690!) and is preserved in the Museum at Paris.

5. **Salix daphnoides**, *Villars, Delph.* iii. p. 765; *Hook. f. Fl. Brit. Ind.* v. p. 631; var. **acutifolia**, *Anderss. in DC. Prod.* xvi. 2, p. 262.

Salix acutifolia, *Willd. Sp. Pl.* iv. p. 668.

SHINGKING: between Moukden and Tungcheshien (*James!*), Fungchung (*Ross*, 143!). Herb. Kew.

This species is distributed from Eastern France eastward to the Pacific.

6. **Salix Daltoniana**, *Anderss. in Journ. Linn. Soc.* iv. p. 49, et *in DC. Prod.* xvi. 2, p. 269; *Hook. f. Fl. Brit. Ind.* v. p. 632.

YUNNAN: Longki and Heechanmen, near Lankong (*Delavay!*). Mus. Paris.

Sikkim and Bhotan.

Var. **Franchetiana**, *Burkill.* *Arbuscula* amœna, 6–10 ped. alta. *Folia* infra pilis longis læte sericea, nec vel in petiolo tantum rufescentia.

SZECHUEN: Moupin (*David!*), Tachienlu (*Mussot*, 348!). Mus. Paris.

In this variety the gland appears, so far as I have seen, to be single, while in the type two are present. I have seen 3 stamens in a flower of a plant collected by Delavay; and further, in a plant from YUNNAN (Mount Tsungchan above Tali, 10,000 feet, *Delavay*, 988!) preserved at Paris I recognize a hybrid between *S. Daltoniana* and *S. elegans.*

7. **Salix elegans**, *Wall. Cat.* 3699; *Anderss. in DC. Prod.* xvi. 2, p. 256; *Hook. f. Fl. Brit. Ind.* v. p. 630.

YUNNAN: near Yunnansen (*Bodinier & Ducloux*, 218!). Mus. Paris.

Afghanistan and the Himalaya.

8. **Salix eriophylla**, *Anderss. in Journ. Linn. Soc.* iv. p. 48, et *in DC. Prod.* xvi. 2, p. 270; *Hook. f. Fl. Brit. Ind.* v. p. 633.

HUPEH: Changlo (*A. Henry*, 6274!); YUNNAN: Mengtze, 6000 ft. (*A. Henry*, 10209, 10493, 10493 A!), at the foot of Tsungchan (*Delavay*, 4146!). Herb. Kew.; Mus. Paris.

North-east India and the Khasia hills.

✓ 9. **Salix (§ Hastatæ) Fargesii**, *Burkill*, n. sp.

Arbuscula ad 6 ped. alta, cortice glabro. *Folia* anguste ovata vel subelliptica, majora ad 7½ poll. longa, 3 poll. lata, supra glabra, infra pilis albis præsertim in nervis sparsis tecta, apice acuta, basi obtusa vel subacuta, margine minutissime serrulata; petiolus ½–1 poll. longus; folia parva subrotunda infra dense hirsuta basin versus ramorum producta. *Amenta* coætanea, in pedunculo foliato erecta; bracteæ perularum fulvæ, nitentes.

Floris masculi bractea anguste obovata, apice rotundata, hirsuta, fulva, 1–1¼ lin. longa; stamina duo bractea duplo longiora, filamentis glabra; glandulæ 2. *Floris* feminei bractea ei floris masculi persimilis, forsan paullo brevior, apicem ovarii fere attingens; ovarium pilosum, conicum; styli 2, fere ovarium æquantes. *Fructus* 1½ lin. longus.

SZECHUEN: South Wushan (*A. Henry*, 5678!), Tchenkeoutin (*Farges*, 795!). Mus. Brit.; Herb. Kew.; Mus. Paris.

A remarkably fine willow, related to *S. moupinensis*, Franchet. It is perhaps the largest-leaved willow known. It is with some hesitation that I place this species, *S. moupinensis*, and *S. Henryi* in the section Hastatæ in spite of a real affinity to *S. elegans* and *S. Miquelii*. Much more material is needed before a satisfactory study of them can be prosecuted. The Himalayan species as well as those of the far East need further investigation.

√10. **Salix** (§ **Viminales**) **floccosa**, *Burkill*, n. sp.

Arbuscula humilis, ramis tortuosis crassis cortice nigris vel atro-fuscis. *Folia* obovata vel obovato-elliptica, 1–2½ poll. longa, 7–12 lin. lata, supra glabra, subtus pilis longis juniora sericea matura floccosa vel glabrescentia, margine minute serrata vel integra, apice obtusa vel rotundata, basi obtusa vel aliquo modo rotundata, venis lateralibus infra conspicuis; petiolus 2–5 lin. longus. *Amenta* coætanea, sat crassa, ad apices ramorum brevium 3–4-foliatorum enata, mascula ad 14 lin. longi, feminea florentia masculis æquilonga vel paululo longiora, dein fructifera ad 3 poll. elongata. *Floris* masculi bractea obovata, apice rotundata, pilis longis tecta, fere medium filamentorum attingens, fusca; stamina duo, filamentis 2 lin. longis basi hirsutis; glandulæ duæ. *Floris* feminei bractea ovarium fere æquans, ei floris masculi similis; ovarium sessile, pilis longis parce tectum, 1 lin. longum; stylus ½ lin. longus, bracteam superans, ut in *Salice Daltoniana* conspicue furcatus, ramis bifidis. *Fructus* maturus 2–2¼ lin. longus.

YUNNAN: Maeulchan, and rocks of Laolongtong above Yentzehay at 11,000 ft., also Likiang at 12,500 ft., always on a calcareous formation (*Delavay*, 2200, 3105, 4323, 4678!). Herb. Kew.; Mus. Paris.

The large bracts, conspicuous veins, and low growth distinguish this willow from *S. sikkimensis*, *S. Daltoniana*, and others of this Central Asiatic affinity.

11. **Salix** (§ **Hastatæ**) **Henryi,** *Burkill*, n. sp.

Arbor parva, 15 ped. alta (*A. Henry*), ramis cortice atris subglaucis, junioribus hirsutis. *Folia* lanceolata vel anguste ovata, apice longe acuminata, basi obtusa, supra mox glabrescentia, infra sericea, 4–5 poll. longa, 1–1½ poll. lata, folia parva basin versus ramorum producta; petiolus 4–6 lin. longus. *Amenta* coætanea, in pedunculo foliato horizontale producta, feminea florifera 2½ poll. longa, fructifera 3½–5 poll. longa. *Floris* feminei bractea anguste ovata, fulva, pilosula, ¾–1 lin. longa; ovarium attenuatum, bracteam superans, hirsutum; stylus ½ lin. longus, ad medium furcatus. *Fructus* 2 lin. longus, pedicello 1–2 lin. longo.

HUPEH: Chienshih (*A. Henry*, 5349, 5843!); SZECHUEN: South Wushan (*A. Henry*, 5671!), Tchenkeoutin (*Farges*!). Mus. Brit.; Herb. Kew.; Mus. Paris.

12. **Salix koreensis,** *Anderss. in DC. Prod.* xvi. 2, p. 271.

COREA: North coast (*Schlippenbach* ex *Andersson*).

13. **Salix Lindleyana,** *Wall. Cat.* 3697; *Anderss. in DC. Prod.* xvi. 2, p. 296; *Hook. f. Fl. Brit. Ind.* v. p. 634.

YUNNAN: Glacier of Likiang on damp rocks (*Delavay*, 294!) Mus. Paris.

Himalaya.

14. **Salix longiflora,** *Anderss. in Journ. Linn. Soc.* iv. p. 50, et *in DC. Prod.* xvi. 2, p. 271; *Hook. f. Fl. Brit. Ind.* v. p. 633.

CHIHLI: Mount Pohuashan (*Bretschneider*!); HUPEH: South Patung, 5000 ft. (*A. Henry*, 5296! in part); SZECHUEN: summit of Mount Omei (*Faber*, 103!); YUNNAN: Tchenfongchan near Takwan, above Mosoyn, near Lankong at 8000 ft., and Heechanmen at 10,000 ft. (*Delavay*!). Mus. Brit.; Herb. Kew.; Mus. Paris.

Also in the Sikkim Himalaya.

/ Var. **albescens,** *Burkill.* *Folia* obovata vel elliptica, tempore fructus maturi 8–15 lin. longa, 5–6 lin. lata, juniora pilis albis (nec rufescentibus) subsericea, dein glabrescentia.

SZECHUEN: Tachienlu (*Mussot*, 347!). Mus. Paris.

15. **Salix Mesnyi,** *Hance in Journ. Bot.* 1882, p. 38.

Salix? populifolia, *Anderss., Hance in Journ. Bot.* 1879, p. 15.

KIANGSU: Shanghai (*Carles*, 362, 365, 366! *Faber*, 187!), Taihoo lake (*Carles*!); CHEKIANG: Meicho (*F. B. Forbes and Carles*, 2057! Kashing, Pingwu (*F. B. Forbes*!); KIANGSI:

Kiukiang (*Maries* !), Liangfung river (*Mesny* !); FORMOSA (*Oldham*, 509, 510 !); HUPEH: Ichang (*A. Henry*, 246, 1277, 3442, 3443, 3558 !), Changyang (*A. Henry*, 5267 !); YUNNAN: Mengtze, 5000 ft. (*A. Henry*, 11250 !), Kweichow (*Faber*, 116 !); KWANGTUNG (*Ford*, 362 !), Canton (*Mesny* in hb. *Hance*, 16446 !). Mus. Brit.; Herb. Kew.; Mus. Paris.

S. Mesnyi is very near some forms of *S. tetrasperma*.

16. **Salix microphyta**, *Franchet*, *Pl. David.* ii. p. 121.

SZECHUEN: Moupin (*David* !). Herb. Paris.

Certainly very near the Himalayan *S. Serpyllum*, Anderss.

17. **Salix moupinensis**, *Franchet*, *Pl. David.* ii. p. 120.

SZECHUEN: Moupin (*David* !), Tachienlu (*Pratt*, 335 !), and without exact locality (*A. Henry*, 8891 !). Mus. Brit.; Herb. Kew; Mus. Paris.

18. **Salix obscura**, *Anderss. in DC. Prod.* xvi. 2, p. 269; *Hook. f. Fl. Brit. Ind.* v. p. 632.

SZECHUEN: Tachienlu, banks of streams, Lamasen (*Soulié*, 22 !). Mus. Paris.

Sikkim.

19. **Salix oreophila**, *Hook. f. ex Anderss. in Journ. Linn. Soc.* iv. p. 57, et *in DC. Prod.* xvi. 2, p. 296; *Hook. f. Fl. Brit. Ind.* v. p. 635.

SZECHUEN: Tachienlu (*Soulié*, 543 !); YUNNAN: under the peak of Lopinchan near Lankong, and on the calcareous ridge of Yentzehay, 8000–11,000 ft. (*Delavay*, 2069, 3541, 4333 !). Herb. Kew.; Mus. Paris.

Sikkim.

20. **Salix pentandra**, *Linn. Sp. Pl.* ed. 1, p. 1016; *Anderss. in DC. Prod.* xvi. 2, p. 206; *F. P. Smith, Chinese Materia Med.* p. 232; *Hance in Journ. Bot.* 1880, p. 301.

YUNNAN: round fields at Kiangyu, and roadsides in the plain of Tali (*Delavay*, 4544, 4628 !), Yunnansen (*Ducloux*, 90 ! *Bodinier et Ducloux*, 69 !) Herb. Kew.; Mus. Paris.

Widely spread in Europe and Northern Asia.

Hance cites with a query a plant from Kiangsu—Pingwu near Kashing (*F. B. Forbes*)—as possibly this species. Smith gives as a Chinese name for this species 'Muh-yang,' a name almost identical with that Debeaux gives for *Salix triandra*, and apparently more or less generic in its application; but he gives no locality.

21. **Salix phylicifolia**, *Linn. Sp. Pl.* ed. 1, p. 1016; *Anderss. in DC. Prod.* xvi. 2, p. 241; *Hance in Journ. Bot.* 1875, p. 137; *Franchet, Pl. David.* i. p. 283.

CHIHLI: Pohuashan (*Bretschneider*!), Jehol (*David*, 1794!). Mus. Brit.; Mus. Paris.

Europe and temperate Asia.

The Chinese plant differs from the type in its pale stems.

22. **Salix purpurea**, *Linn. Sp. Pl.* ed. 1, p. 1017; *Anderss. in DC. Prod.* xvi. 2, p. 306; *Debeaux, Fl. Tchef.* pp. 16, 130; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 255.

SHINGKING: south of Hingjing (*Ross*, 262!); SHANTUNG: Chefoo (*Fauvel*!), sands of Fouchanyen (*Debeaux*). Herb. Kew.; Mus. Paris.

Temperate parts of the Old World.

Var. **stipularis**, *Franchet, Pl. David.* i. p. 284.

CHIHLI: Jehol (*David*!). Mus. Paris.

23. **Salix sikkimensis**, *Anderss. in DC. Prod.* xvi. 2, p. 269; *Hook. f. Fl. Brit. Ind.* v. p. 632.

YUNNAN: woods of Kontoni, at 10,000 ft. (*Delavay*, 2792!). Mus. Paris.

Sikkim.

24. **Salix** (§ **Purpureæ**) **subpycnostachya**, *Burkill*, n. sp.

Arbor, ramis cortice fuscescentibus vel nigro-purpurascentibus glabris. *Folia* oblanceolata, integra, juniora pilos longos paucos gerentia, dein glabra, quum fructus maturus est forsan vix matura, ad 1 poll. longa, 4 lin. lata, apice obtusa vel rotundata, basi in petiolum 1 lin. longum attenuata. *Amenta* præcocissima, sessilia, cylindrica, florentia 9–12 lin. longa, feminea fructifera 1½–2¼ poll. longa; bracteæ perularum castaneæ. *Floris* masculi bractea obovata, subacuta, nigra, basi viridescens, pilis longis tecta, 1 lin. longa; stamina duo glabra et filamentis et antheris purpureis coalita, duplo bractea longiora; glandula unica. *Floris* feminei bractea ei floris masculini persimilis; ovarium sessile, bracteam æquans, dense hirsutum; stylus ad 1 lin. longus, apice tantum furcatus. *Fructus* 2–2½ lin. longus.

SZECHUEN: Tachienlu, 9000–13,500 ft. (*Pratt*, 751, 835!), valley of Jerikhou near Tachienlu (*Soulié*, 569!). Herb. Kew.; Mus. Paris.

This species is to be distinguished from *S. pycnostachya*, Anderss., by its long style, more acute bracts, and less hairy leaves. The leaves are produced very much later than the flowers.

25. **Salix tetrasperma**, *Roxb. Cor. Pl.* i. p. 66, t. 97; *Miq. Fl. Ind. Bat.* i. pt. ii. p. 460; *Anderss. in DC. Prod.* xvi. 2, p. 192; *Hance in Journ. Bot.* 1868, p. 49, et 1879, p. 15; *Hook. f. Fl. Brit. Ind.* v. p. 626.

Salix Oldhamiana, *A. Henry in Trans. Asiatic Soc. Japan*, xxiv. *Suppl.* p. 90, non *Miq.*

FORMOSA: Taipei (*A. Henry*, 1403!), Tamsui (*A. Henry*, 1404, 1473!); YUNNAN: Mengtze, 4600–6000 ft. (*Hancock*, 357! *A. Henry*, 9338, 9338 A, 9338 B, 9338 C, 9338 D!), Lientou near Tali (*Delavay*!); KWANGTUNG: muddy banks of the Canton river (*Sampson* ex *Hance*), Shekmun (*Sampson*!); KWANGSI: River Liangfung (*Mesny* ex *Hance*). Mus. Brit.; Herb. Kew.; Mus. Paris.

India to Sumatra and Java.

Hance suspected this species to be cultivated and not indigenous in China, but further evidence tends to disprove his idea.

26. **Salix Thunbergiana**, *Blume ex Anderss. in DC. Prod.* xvi. 2, p. 271.

Salix gracilistyla, *Miq. in Ann. Mus. Bot. Lugd.-Bat.* iii. p. 26; *Franch. et Sav. Enum. Fl. Jap.* i. p. 461; *Baker & S. Moore, in Journ. Linn. Soc.* xvii. p. 386.

Salix brachystachys, *Franch. et Savat. Enum. Fl. Jap.* i. p. 460, quoad planta mascula non *Benth.*

SHINGKING: Fungwhangshan (*Ross*, 16!), Changdien (*Ross*, 175!); COREA: Soul mountains (*Carles*!). Herb. Kew.

Japan.

27. **Salix triandra**, *Linn. Sp. Pl.* ed. 1, p. 1016; *Anderss. in DC. Prod.* xvi. 2, p. 202; *Debeaux, Fl. Tchef.* p. 130; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 225.

Salix amygdalina, *Linn. loc. cit.*; *Debeaux, Fl. Tients.* p. 41.

CHIHLI: banks of the Peiho and ditches near Tientsin (*Debeaux*); SHANTUNG: sand-dunes of Fouchanyen near Chefoo (*Debeaux*).

Europe, N. Africa, Canaries, and N. Asia.

Debeaux names his plant from Chefoo as var. *maritima*. He had only leafy shoots without flowers. The same must be said of his var. *subdiscolor* from Tientsin. Both localities need confirmation, and in the want of flowers little value can be attached to the varietal names he gives.

28. **Salix variegata**, *Franchet, Pl. David.* ii. p. 120.

HUPEH: Ichang (*A. Henry*, 46, 48, 957, 3974, 7182!), Gorge of the Yangtzekiang near Ichang (*A. Henry*, 7175!); SZECHUEN: on the rocks in the Yangtzekiang river (*David*!); YUNNAN: plain of Tali (*Delavay*, 4539!). Mus. Brit.; Herb. Kew.; Mus. Paris.

The stamens are not always united to the summit, but are often no more joined than is usual in the form of *S. repens*, Linn., with united stamens; and it so resembles this species in habit that at the first glance one instinctively suggests the section Repentes for it.

29. **Salix viminalis**, *Linn. Sp. Pl.* ed. 1, p. 1021; *Anderss. in DC. Prod.* xvi. 2, p. 264; *Boiss. Fl. Or.* iv. p. 1191; *Debeaux, Fl. Shangh.* p. 56; *Hook. f. Fl. Brit. Ind.* v. p. 631.

KIANGSU: Woosung, Shanghai (*Debeaux*).

Temperate regions of Asia and Europe.

30. **Salix Wallichiana**, var. **grisea**, *Anderss. in Act. Holm.* 1850, p. 447, et *in DC. Prod.* xvi. 2, p. 223; *Hook. f. Fl. Brit. Ind.* v. p. 628.

HUPEH: Ichang and Nanto (*A. Henry*, 1379, 3399, 5349, 5349 A, 5355, 7653!); CHUSAN ARCHIPELAGO: Paoche, near Chifengsan, and in the hills of Laoysen (*Hugh*!); SHENSI: Mount Tsinling, 3300 to 6000 ft. (*Delavay*!); SZECHUEN: Moupin (*David*!), Tchenkeoutin, 4500 ft., and Hankyre, 3800 ft. (*Farges*, 983, 1142!). Mus. Brit.; Herb. Kew.; Mus. Paris.

North-west Himalaya and Afghanistan.

In Yunnan it is used as a febrifuge and called Yang-lieou-chou, according to Farges.

31. **Salix Warburgii**, *O. Seemen in Engl. Jahrb.* xxiii. Beibl. 57, p. 43.

FORMOSA: Sintiam, Taipefu, and Kelung in the north of the island (*Warburg* ex *O. Seemen*).

I suspect that this is *Salix Mesnyi*.

[*Populus acuta*, David ex Bretschn. Hist. Eur. Bot. Disc. p. 851, from Szechuen and perhaps Kansuh, is unknown to me.]

1. **Populus alba**, *Linn. Sp. Pl.* ed. 1, p. 1034; *Wesmael in DC. Prod.* xvi. 2, p. 324; *Brandis, For. Fl.* p. 473; *Maxim. in Bull. Soc. Imp. Nat. Mosc.* 1879, p. 48; *Fauvel in Mém. Soc. Sc. Nat. Cherbourg*, xxiii. p. 301; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 255; *Wesmael in Bull. Soc. Roy. Bot. Belg.* xxvi. p. 373; *Hook. f. Fl. Brit. Ind.* v. p. 638; *Bretschn. Hist. Eur. Bot. Disc.* p. 499.

CHIHLI: Peking (*Skatschkow* and *Bretschneider* ex *Maximowicz*); SHANTUNG: Chefoo, cultivated (*Fauvel* ex *Franchet*); CHUSAN ARCHIPELAGO: Kintang (*Fauvel*).

The type is distributed through the temperate regions of the Old World, and extends into India.

Var. **tomentosa**, *Wesmael in Bull. Soc. Roy. Bot. Belg.* xxvi. p. 373.

Populus tomentosa, *Carrière in Revue Hortic.* 1867, p. 340; *Wesmael in DC. Prod.* xvi. 2, p. 325; *Bretschn. Hist. Eur. Bot. Disc.* p. 831.

CHIHLI: Siwantze (*Simon* ex *Carrière*).

2. **Populus balsamifera**, *Linn. Sp. Pl.* ed. 1, p. 1034; *Wesmael in DC. Prod.* xvi. 2, p. 329; *Kanitz in Ber. math.-nat. Ungarn* (repr.), p. 7, and *Pl. Exped. Széch.* p. 57; *Wesmael in Bull. Soc. Roy. Bot. Belg.* xxvi. p. 378; *Hook. f. Fl. Brit. Ind.* v. p. 638.

KANSUH: hills near Kumbum, 10,000 ft. (*Szechenyi* ex *Kanitz*).

Temperate Asia and N. America.

Var. **suaveolens**, *Loud. Encycl.* p. 830; *Wesmael, loc. cit.*

Populus suaveolens, *Fisch. ex Loud. Encycl.* p. 830; *Maxim. in Bull. Soc. Imp. Nat. Mosc.* 1879, p. 51; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 255; *Korshinsky in Act. Hort. Petrop.* xii. p. 390; *Sargent, Forest-Fl. Japan*, p. 71.

CHIHLI: Peking (*Tatarinow* and *Bretschneider* ex *Maximowicz*); SHINGKING: near Moukden (*James*!); SHANTUNG: Chefoo, cultivated (*Fauvel*); SHENSI: Tsunghi mountains (*Piasezki* ex *Maximowicz*); KANSUH: Tsungli mountains and sources of Hoangho (*Piasezki* ex *Maximowicz*). Mus. Brit.; Herb. Kew.

Temperate Eastern Asia and N. America.

Var. **laurifolia**, *Wesmael, loc. cit.*; *Baker & S. Moore in Journ. Linn. Soc.* xvii. p. 387.

Populus laurifolia, *Ledeb. Ic. Fl. Alt.* t. 479.

CHIHLI: Peking (*Bushell*!); SHINGKING: Corean Gate and Laohoo (*Ross*, 17, 69!). Herb. Kew.

Siberia.

Var. **Simonii**, *Wesmael in Bull. Soc. Roy. Bot. Belg.* xxvi. p. 378.

Populus Simonii, *Carrière in Revue Hortic.* 1867, p. 360; *Maxim. in Bull. Soc. Imp. Nat. Mosc.* 1879, p. 52; *Kanitz in Ber. math.-nat. Ungarn*, (repr.) p. 7, and *Pl. Exped. Széch.* p. 58; *Bretschn. Hist. Eur. Bot. Disc.* p. 832.

CHIHLI: Siwantze (*Simon*, 151!); SHINGKING: between Kaichow and Kinchow (*Ross*, 211!); KANSUH: Sziningfu (*Szechenyi* ex *Kanitz*). Herb. Kew.; Mus. Paris.

3. **Populus euphratica**, *Olivier, Voy.* iii. tt. 45, 46; *Brandis, For. Fl.* p. 474, t. 63; *Wesmael in DC. Prod.* xvi. 2, p. 326, et *Monogr.* tt. 10–13, et *in Bull. Soc. Roy. Bot. Belg.* xxvi. p. 375; *Regel in Act. Hort. Petrop.* vi. p. 473; *Aitchison in Trans. Linn. Soc.* n. s. iii. p. 111; *Hook. f. Fl. Brit. Ind.* v. p. 638; *Trautv. in Act. Hort. Petrop.* ix. p. 190; *Engler in Notizbl. K. Bot. Garten zu Berlin*, ii. p. 217.

Populus diversifolia, *Schrenck, Enum.* 1842, p. 15; *Komarow in Ber. Petersb. Naturf. Ges.* xxiii., ex *Just's Jahresbericht*, 1894, ii. p. 84; *Bretschn. Hist. Eur. Bot. Disc.* p. 986.

CHIHLI: Peking (*Alcock*!); KANSUH: beyond the Great Wall (*Piasezki* ex *Maximowicz*). Herb. Kew.

Distributed from N. China, south-westward through N.W. India, Afghanistan, and Turkestan to Syria, Egypt, and British East Africa.

4. **Populus lasiocarpa**, *Oliver in Hook. Ic.* t. 1943.

Populus Fargesii, *Franchet in Bull. Mus. Hist. Nat. de Paris*, 1896, p. 280.

HUPEH: District of Chienshih (*A. Henry*, 5423 A!), Patung, in the mountains only (*A. Henry*, 4013!); SZECHUEN: Tchenkeoutin (*Farges*!). Mus. Brit.; Herb. Kew.; Mus. Paris.

Monsieur Franchet himself pointed out to me that his *P. Fargesii* should be placed under *P. lasiocarpa*.

5. **Populus nigra**, *Linn. Sp. Pl.* ed. 1, p. 1034; var. **sinensis**, *Carrière in Revue Hortic.* 1867, p. 340; *Wesmael in DC. Prod.* xvi. 2, p. 327, et *in Bull. Soc. Roy. Bot. Belg.* xxvi. p. 376; *Maxim. in Bull. Soc. Imp. Nat. Mosc.* 1879, p. 50; *Franchet in Mém. Soc. Sc. Nat. Cherbourg*, xxiv. p. 255.

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Vol. XXVI. is still in course of issue, and the Parts already published are as follows:—

Vol. XXVI., Nos. 173–178.

[Nos. 179–180 are reserved for the conclusion of Messrs. Forbes and Hemsley's 'Index Floræ Sinensis,' of which this is Part 178.]

Vol. XXVII., Nos. 181–188. (Complete.)

Vol. XXVIII., Nos. 189–196. (Complete.)

Vol. XXIX., Nos. 197–204. (Complete.)

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THE JOURNAL

OF

THE LINNEAN SOCIETY.

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NORTHERN CHINA (*Simon* ex *Carrière*); SHANTUNG: Chefoo, perhaps cultivated (*Fauvel*!); SHENSI: Tsunghi mountains and elsewhere (*Piasezki* ex *Maximowicz*); KANSUH: Tsungli mountains (*Piasezki* ex *Maximowicz*). Mus. Paris.

The type is widely spread in the temperate regions of the Old World; the variety is confined to Northern China.

This variety, in its coriaceous leaves, approaches *P. euphratica*.

6. **Populus Przewalskii**, *Maxim. in Mél. Biol.* xi. p. 321; *Kanitz in Ber. math.-nat. Ungarn*, (repr.) p. 11, et *Pl. Exped. Szech.* p. 57; *Bretschn. Hist. Eur. Bot. Disc.* p. 984.

KANSUH: between the Hoangho and the Great Wall, Liangtschou, Shandansiang, sands of Hautschou (*Piasezki* ex *Maximowicz*), Hoangho (*Szechenyi* ex *Kanitz*, *Przewalski* ex *Bretschneider*).

Mongolia and Tibet.

[*Populus spinosa*, F. P. Smith, Chinese Materia Med. p. 176, from Shensi, Shantung and Hupeh, is unknown to me. Its medicinal use may lead to an identification.]

7. **Populus tremula**, *Linn. Sp. Pl.* ed. 1, p. 1034; *Wesmael in DC. Prodr.* xvi. 2, p. 325; *F. P. Smith, Chinese Materia Med.* p. 176; *Baker & S. Moore in Journ. Linn. Soc.* xvii. (1879) p. 387; *Franch. et Sav. Enum. Pl. Jap.* i. p. 463; *Franchet, Pl. David.* i. p. 284; *Fauvel in Mém. Soc. Sc. Nat. Cherbourg*, xxiii. p. 200; *Korshinsky in Act. Hort. Petrop.* xii. p. 390.

CHIHLI: Jehol (*David*, 1687, 1726!), Peking (*David*, 2362!); SHINGKING: Hingjing (*Ross*, 301!), Kwandien (*Ross*, 171!), between Tungcheshien and Maoershan, Yaloo River (*James*!); KANSUH: Tangut (*Przewalski*!); CHEKIANG: Ningpo, cultivated (*Fauvel*); HUPEH: Fang (*A. Henry*, 6736!); YUNNAN: Maokoutakiang near Tali, 7200 ft. (*Delavay*, 896!); SZECHUEN: Heoupin near Tchenkeoutin, 4600 ft. (*Farges*!). Mus. Brit.; Herb. Kew.; Mus. Paris.

Europe, N. Africa, and Northern Asia to the Kurile Islands; in the more Eastern parts chiefly as var. *villosa*, Wesmael.

✓ Var. **adenopoda**, *Burkill*.

Populus adenopoda, *Maxim. in Bull. Soc. Imp. Nat. Mosc.* 1879, p. 50.

CHUSAN ARCHIPELAGO: Siekintsieu (*Hugh*!); HUPEH: Hankow, Yunyanfu (*Piasezki* ex *Maximowicz*), Patung (*A. Henry*, 5281!), Ichang (*A. Henry*, 3798!), Nanto and mountains to northward (*A. Henry*, 3798, 3816!); SHENSI: River Han (*Piasezki* ex *Maximowicz*); SZECHUEN: South Wushan (*A. Henry*, 5211 A!); YUNNAN: Kiaochetong (*Delavay*!). Mus. Brit.; Herb. Kew.; Mus. Paris.

There is little to distinguish var. *adenopoda* from var. *villosa*, Wesm., except the more acuminate leaves and the larger glands at their insertion upon the petiole. *P. tremula* is, according to F. P. Smith, used medicinally and named "Fu-i."

129. CERATOPHYLLACEÆ.

(By S. A. SKAN.)

1. **Ceratophyllum demersum**, *Linn. Sp. Pl.* ed. 1, p. 992; *DC. Prodr.* iii. p. 73; *Boiss. Fl. Orient.* iv. p. 1202; *Hook. f. Fl. Brit. Ind.* v. p. 639; *Franchet, Pl. David.* i. p. 258; *Gaertn. Fruct.* t. 44.

Ceratophyllum verticillatum, *Roxb. Hort. Beng.* p. 68.

CHIHLI: Jehol (*David*, 1915); KIANGSI: Kiukiang (*F. B. Forbes*!). Herb. Kew.

Widely distributed in almost all temperate and tropical countries.

130. GNETACEÆ.

(By S. A. SKAN.)

1. **Ephedra equisetina**, *Bunge in Mém. Sav. Étr. Pétersb.* vii. 1851, p. 499; *Walp. Ann.* v. p. 802; *Stapf, Ephedra*, p. 81, t. 3, xxi. figg. 1–4.

Ephedra procera (*a*. typica *et β*. cernua), *Regel in Act. Hort. Petrop.* vi. pp. 480, 481; *Franchet, Pl. David.* i. p. 284.

NORTH CHINA: without locality (*Tatarinow*!); CHIHLI: Siwan (*David*, 489, ex *Franchet*), Kalgan (*Przewalski* ex *Stapf*); KANSUH: Tatsingchan (*David*, 2647!). Herb. Kew.

The Great Balkan, Turkestan, Altai, and the whole of Central Asia.

2. **Ephedra Gerardiana**, *Wall. Cat.* no. 6048; *Royle, Ill. Bot. Himal.* pp. 40, 348; *C. A. Meyer, Versuch Monogr. Ephedra*, p. 102; *DC. Prodr.* xvi. 2, p. 359; *Stapf, Ephedra*, p. 75.

Var. **sikkimensis**, *Stapf, Ephedra*, p. 76.

Ephedra macrocephala, *Bertol. Misc.* xxiii. p. 17, t. 3.

Ephedra vulgaris, *Brandis, For. Fl.* p. 501 partim.

WEST SZECHUEN: near Tachienlu (*Pratt*, 624!). Mus. Brit.; Herb. Kew.

Sikkim.

3. **Ephedra intermedia**, *Schrenk et C. A. Mey. in C. A. Mey. Versuch Monogr. Ephedra*, p. 88; *Regel in Act. Hort. Petrop.* vi. p. 483; *Stapf, Ephedra*, p. 61, t. 2. xv. figg. 1–9.

Var. **glauca**, *Stapf, Ephedra*, pp. 62, 63.

Ephedra glauca, *Regel in Act. Hort. Petrop.* vi. p. 484.

KANSUH (*Przewalski*!). Herb. Kew.

Persia, Central Asia, and Kashmir.

4. **Ephedra monosperma**, *C. A. Meyer, Versuch Monogr. Ephedra*, p. 89, t. 8. fig. 11; *Carrière, Traité Gén. Conif.* ed. 1, p. 559; *Maxim. Index Fl. Mongol.* p. 485; *Regel in Act. Hort. Petrop.* vi. p. 479; *Stapf, Ephedra*, p. 73, t. 3. xix. figg. 1–9, xxxi. fig. 3.

Ephedra monospermos, *Gmel. in Amman. Stirp. Imp. Ruth.* p. 178.

Ephedra monostachya, β, *Willd. Sp. Pl.* iv. p. 859.

KANSUH (*Przewalski*!). Herb. Kew.

Eastern Turkestan, through Central Asia to the Amur.

1. **Gnetum scandens**, *Roxb. Fl. Ind.* iii. p. 518; *Seem. Bot. Voy. 'Herald,'* p. 416 (excluding syn.); *DC. Prodr.* xvi. 2, p. 351; *Hook. f. Fl. Brit. Ind.* v. p. 642; *Brandis, For. Fl.* p. 502; *Graham, Cat. Bomb. Pl.* p. 188; *Griff. Notul.* iv. p. 29, et *in Trans. Linn. Soc.* xxii. p. 309, t. 55. figg. 1–8, 22, 23, et t. 56. figg. 39, 40, 42.

Gnetum edule, *Blume, Nov. Pl. Fam.* p. 31.

Gnetum funiculare, *Wight, Ic.* t. 1955 (non *Blume*).

Gnetum gnemonoides et G. ula, *Brongn. in Duperr. Voy. Bot.* p. 12.

Gnetum latifolium, *Parl. in DC. Prodr.* xvi. 2, p. 350 (non *Blume*).

Gnetum pyrifolium, *Miq. in Herb. Hohenack.* no. 489.

Thoa edulis, *Willd. Sp. Pl.* iv. p. 477.

YUNNAN: Mengtze (*A. Henry*, 10952!); HONGKONG (*Champion*! *Wright*, 472!). Herb. Kew.

India and Malaya.

131. CONIFERÆ.

(By Dr. M. T. MASTERS, F.R.S.)

1. **Libocedrus macrolepis,** *Benth. in Benth. et Hook. Gen. Pl.* iii. p. 426.

Calocedrus macrolepis, *Kurz in Journ. Bot.* xi. 1873, p. 196.

FORMOSA (*Bourne* !); YUNNAN (*Anderson* !).

"The most valuable wood in Formosa."—*Bourne.* Herb. Kew.

1. **Thuya** (§ **Biota**) **orientalis,** *Linn. Sp. Pl.* ed. 2, p. 1422; *Abel, Narr. Journ. China*, p. 145; *Franchet in Journ. de Bot.* 1899, p. 263.

Biota orientalis, *Endl. Synops. Conif.* p. 47; *Parl. in DC. Prodr.* xvi. 2, p. 461; *Carrière, Conif.* ed. 2, p. 93; *Kanitz, Pl. Exped. Szech.* p. 63.

Biota chinensis, *Hort. ex Parl. in DC. Prodr.* xvi. 2, p. 462.

Thuya chinensis, *Hort. ex Parl. in DC. Prodr.* xvi. 2, p. 462.

CHINA (*Incarville* ex *Franchet*); CHIHLI: hills west of Peking (*Fortune*! *Bunge*!); FORMOSA (*A. Henry*, 403, 1975, 2076! cult.); HUPEH: Nanto and mountains to the northward (*A. Henry*, 3910!); SHENSI: Toumianfun (*Giraldi* ex *Beissner*); KANSUH (*Szechenyi* ex *Kanitz*); SZECHUEN: Chungching (*Bourne*!), district of Tchenkeoutin (*Farges* !); SOUTH CHINA: Kolapou (*Giraldi* ex *Beissner*). Mus. Brit.; Herb. Kew.; Mus. Paris.; Herb. Boissier; Herb. DC.

Siberia, Turkestan, N.W. Himalaya, Japan.

[In the Paris herbarium is a specimen from Père Farges, n. 1158, which closely resembles the form known in gardens as *Thuya plicata*, Donn (not *T. plicata*, D. Don, in Lambert *ex parte*). It grows on Hankyse at a height of 1400 feet, and its native name is said to be "Gaypeechou." Franchet (Journ. de Bot. 1899, p. 262) considers this to be the type of a new species, described by him as *T. sutchuenensis*. It is desirable to compare this with the Japanese, Siberian, and West-American forms. (See Masters in Gard. Chron. xxi. 1897, p. 258.)]

1. **Cupressus funebris,** *Endl. Synops. Conif.* p. 58; *Parl. in DC. Prodr.* xvi. 2, p. 471; *Hook. f. Fl. Brit. Ind.* v. p. 646; *Kanitz, Pl. Exped. Szech.* p. 63; *Franchet in Journ. de Bot.* 1899, p. 263.

Cupressus amœna, *C. Koch in Monatsschr. Garten-Pflanz.* i. p. 110.

Cupressus pendula, *Abel in Staunton, Embassy to China*, ii. p. 525, non *Thunb.*

"Weeping Thuya," *Staunton, Embassy to China*, ii. p. 525, t. 41.

NORTH CHINA (*Champion* !); KIANGSU: Shanghai (*Fortune* !); HUPEH: Nanto and mountains to the northward, and glens about Ichang (*A. Henry*, 1070, 1898 !); SZECHUEN (*Szechenyi*, 123 B ex *Kanitz*), Tchenkeoutin (*Farges*, 1158, "Nom Chinois Peechou"), Yangtsekiang (*Faber*, 991 !). Mus. Brit.; Mus. Paris.; Herb. Kew.

Sikkim, Bhotan, cult.

"A specimen of one of the most beautiful trees in China .... It has the leaves of a *Thuya*; the trunk is tall and straight, 50–60 feet, the branches are horizontal, inclining upwards at the points, and the branchlets are long and pendulous. It forms a striking feature in the landscape owing to its weeping habit. If one could imagine an evergreen weeping-willow with a straight trunk, he would have a good idea of the form and beauty of the tree."—*Fortune MSS.* in Herb. Kew.

2. **Cupressus sempervirens**, *Linn. Sp. Pl.* ed. 2, p. 1422; *Parl. in DC. Prodr.* xvi. 2, p. 468; *Hook. f. Fl. Brit. Ind.* v. p. 645; *Franchet in Journ. de Bot.* 1899, p. 263.

Cupressus horizontalis, *Mill. Gard. Dict.* ed. 8. n. 2.

Cupressus patula, *Spad. Xilolog.* i. p. 193.

Cupressus Tourneforti, *Audib. Cat.* (1834) ex *Carrière, Conif.* ed. 1, p. 115.

YUNNAN: near Mosoyn (*Delavay* ex *Franchet*, "subspontanea").

Northern Persia, Syria, and Asia Minor (horizontally branched variety).

1. **Juniperus chinensis**, *Linn. Mantissa*, p. 127; *Endl. Synops. Conif.* p. 20; *Parl. in DC. Prodr.* xvi. 2, p. 487; *Carrière, Conif.* ed. 2, p. 29; *Sieb. et Zucc. Fl. Jap.* tt. 126, 127; *Franchet, Pl. David.* i. p. 291.

Juniperus Cabiancæ, *Vis. in Mem. Ist. Venet.* vi. (1856) p. 246.

Juniperus cernuus, *Roxb. Fl. Ind.* iii. p. 839.

Juniperus flagelliformis, *Reeve*, teste *Gord Pinet.* 116.

Juniperus japonica, *Hort. ex Carrière, Conif.* ed. 2, p. 33.

Juniperus mongolica, *Hort. ex K. Koch, Dendrol.* ii. p. 138.

Juniperus nepalensis, *Hort. ex Endl. Synops. Conif.* p. 21.

Juniperus Reevesiana, *Hort.* ex *Endl. Synops. Conif.* p. 31.

Juniperus struthiacea, *Knight, Synops. Conif.* p. 13.

Juniperus Thunbergii, *Hook. et Arn. in Beechey Voy.* p. 271.

CHINA: without locality (*Millett*! *Siaunton*!); NORTH CHINA (*Daniell*! *Bretschneider*! *David*! *Fortune*!); KIANGSU: Shanghai (*Maingay*!); CHUSAN ARCHIPELAGO (*Cantor*!); HUPEH: Fang (*A. Henry*, 6576!); NORTH SHENSI: various localities (*Giraldi* ex *Beissner*); COREA (*Siebold* ex *Parlat.*); LUCHU ARCHIPELAGO? Mus. Brit.; Herb. Kew.

Japan.

Var. **pendula**, *Franchet, Pl. David.* i. p. 291.

SHENSI: Tsinling (*David* ex *Franchet*).

Var. **procumbens**, *Endl. Synops. Conif.* p. 21.

CHINA: without locality (*Fortune*, 48!); COREA (ex *Endlicher*).

2. **Juniperus communis**, *Linn. Sp. Pl.* ed. 1, p. 1040; *Parl. in DC. Prodr.* xvi. 2, p. 479; *Rich. Conif.* p. 33, t. 5; *Endl. Synops. Conif.* p. 15; *Carrière, Conif.* ed. 2, p. 17; *Franchet in Journ. de Bot.* 1899, p. 264.

SZECHUEN: Tachienlou (*Soulié*!), Tchenkeoutin and other localities (*Farges*!). Mus. Paris.

Var. **nana**, *Baumg. Fl. Transylv.* ii. p. 380.

Juniperus nana, *Willd. Berl. Baumz.* p. 159; *Endl. Synops. Conif.* p. 13; *Carrière, Conif.* ed. 2, p 14.

NORTH CHINA: Changpeishang, at 1000–7500 feet (*James*!). Herb. Kew.

3. **Juniperus litoralis**, *Maxim. in Bull. Acad. Pétersb.* xii. (1868) p. 230.

Juniperus conferta, *Parl. in DC. Prodr.* xvi. 2, p. 481.

YUNNAN (*Anderson*!); LUCHU ARCHIPELAGO (*Wright*, 309!). Herb. Kew.

Japan.

4. **Juniperus recurva**, *Hamilton in D. Don, Prod. Nep.* p. 55; *Franchet, Pl. David.* i. p. 292; *Hook. f. Fl. Brit. Ind.* v. p. 647; *Franchet in Journ. de Bot.* 1899, p. 263; *Griffith, Ic. Pl. Asiat.* t. 373.

SHENSI: Tsinling mountains (*David*!), Mount Kouanlousan (*Giraldi* ex *Beissner*); SZECHUEN: various localities (*Farges*!

Soulié !); YUNNAN: various localities (*Delavay* !). Mus. Paris.; Herb. Kew.

Himalaya, Afghanistan.

Var. **squamata**, *Parl. in DC. Prodr.* xvi. 2, p. 482.

Juniperus densa, *Gord. Suppl. Pinet.* p. 32.

Juniperus squamata, *Hamilton in D. Don, Prod. Nep.* p. 55.

HUPEH (*A. Henry*, 5935, 6935, 6990 !); SZECHUEN (*Soulié* ! *Farges*, 637 bis !); YUNNAN (*Delavay* !). Mus. Brit.; Mus. Paris.; Herb. Kew.

A shrub 1 foot high, spreading over rocks with 6 feet or more radius. It is like the *nana* variety of *communis*, but has broader and shorter leaves, and the berries have but one seed.

5. **Juniperus rigida**, *Sieb. et Zucc. Fl. Jap.* ii. p. 109, t. 125; *Franchet, Pl. David.* i. p. 292, et *in Journ. de Bot.* 1899, p. 264.

NORTH SHENSI (*Giraldi* ex *Beissner*); YUNNAN: on hills near Mosoyn and Haysi (*Delavay* ?); COREA: near Seoul (*Veitch* !). Mus. Brit.; Mus. Paris.; Herb. Kew.

Mongolia, Japan.

6. **Juniperus sphærica**, *Lindl. in Lindl. et Paxt. Flow. Gard.* i. p. 58, fig. 35.

Juniperus chinensis var. Smithii, *Loud.* ex *Gord. Pinet.* p. 119.

Juniperus Fortunei, *Hort. ex Carrière, Conif.* ed. 2, p. 32.

NORTH CHINA: without locality (*Fortune*, 49 !). Mus. Brit.

Probably not really distinct from *J. chinensis*.

7. **Juniperus taxifolia**, *Hook. et Arn. Beechey Voy.* p. 271; *Sieb. et Zucc. Fl. Jap.* ii. p. 109.

Juniperus oblonga pendula, *Hort.*

Juniperus triangularis, *Hort.*

KIANGSU: Shanghai (*Maingay*, 308 !); CHEKIANG (*Fortune* ! *Hance* !); HUPEH: Ichang and Patung (*A. Henry*, 5, 2876, 2876 A !); SZECHUEN: South Wushan (*A. Henry*, 5653 !); SOUTH CHINA (*Seemann*, 2403 !). Mus. Brit.; Herb. Kew.

"Berries orange, the size of a large pea. Tree 40 feet. Wood good."—*A. Henry*.

[In addition to the preceding are specimens from Mount Omei, Szechuen, collected by Faber (nos. 989 and 990), which appear to be distinct, but resemble some forms of *J. communis*. The evidence is not at present sufficient to warrant the constitution of a new species, nor indeed is it certain that the two specimens referred to are of the same species.]

1. **Cryptomeria japonica,** *D. Don in Trans. Linn. Soc.* xviii. (1841) p. 166, t. 13. fig. 1; *Franch. et Savat. Enum. Pl. Jap.* i. p. 469; *Franchet, Pl. David.* i. p. 291.

Cryptomeria Fortunei, *Otto et Dietr. Allg. Gartenz.* 1853, p. 234.

Cupressus japonica, *Linn. f. Suppl.* p. 421.

Taxodium japonicum, *Brongn. in Ann. Sc. Nat.* 1re sér. xxx. (1833) p. 183.

CHINA: without locality (*Millett*! *Fortune*!); KIANGSU: Shanghai (*Maingay*, cult.!); CHUSAN ARCHIPELAGO (*Home*!); FOKIEN (*David*!), Amoy (*Swinhoe*!); HUPEH: Ichang (*A. Henry*, 1340! "The Peacock Pine, cultivated, said to come from Yunnan"); SZECHUEN: Mount Omei (*Faber*!); YUNNAN (*Anderson*, *A. Henry*, 9667, 9667 A! "an enormous tree"). Mus. Brit.; Herb. Kew.

Japan.

This species presents many curious variations, and the leaves differ in appearance in various stages of the growth of the plant.

1. **Glyptostrobus heterophyllus,** *Endl. Synops. Conif.* p. 70; *Parlat. in DC. Prodr.* xvi. 2, p. 439; *Carrière, Conif.* ed. 2, p. 189; *Masters in Journ. Bot.* xxxviii. (1900), p. 37.

Glyptostrobus pensilis, *K. Koch, Dendrol.* ii. p. 191.

Schubertia japonica, *Spach, Hist. Vég. Phan.* xi. p. 352.

Taxodium heterophyllum, *Brongn. in Ann. Sc. Nat.* 1re sér. xxx. (1833) p. 184.

Taxodium japonicum, β. heterophyllum, *Brongn. l. c.*

Taxodium sinense, *Forbes, Pinet. Woburn.* p. 179.

Thuya lineata, *Poir. Encycl. Suppl.* v. p. 305.

Thuya pensilis, *Staunton, Embassy to China*, p. 436.

CHINA: without locality (*Fortune*, 46, 120!); KWANGTUNG (*Staunton*! *Macartney*!), Whampoa (*Wright*, 470!), neighbourhood of Canton (hb. *Hance*, 5276! "The water pine of Canton"). Mus. Brit.; Mus. Paris.; Herb. Kew.

Leaves polymorphous and heterotaxic, sometimes tristichous, long and linear; at other times, and, on the fruiting branches, spirally imbricate, short, rather obtuse.

1. **Cephalotaxus drupacea,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 108, et *Fl. Jap.* ii. p. 66, tt. 130, 131; *DC. Prodr.* xvi. 2, p. 504; *Franch. et Savat. Enum. Pl. Jap.* i. p. 473.

CHUSAN ARCHIPELAGO (*Home*!); HUPEH: Changyang, Ichang, and Patung (*A. Henry*, 107, 5030, 7831 !) ; COREA : south coast (*Perry*). Mus. Brit. ; Herb. Kew.

Japan.

"The cow's-tail pine grows to a large size for a Chinese tree, being sometimes 20 feet in circumference. The wood is used for coffins."—*A. Henry*.

2. **Cephalotaxus Fortunei**, *Hook. Bot. Mag.* t. 4999 ; *DC. Prodr.* xvi. 2, p. 503 ; *Franchet, Pl. David.* i. p. 292, et *in Journ. de Bot.* 1899, p. 265 ; *Kanitz, Pl. Exped. Szech.* p. 63.

KIANGSU : Shanghai (*Fortune* !) ; CHUSAN ARCHIPELAGO (*Fortune* !) ; KIANGSI : Kiukiang (*Forbes*, 86 ! *Maries* ! *Shearer* ! *David* !) ; FOKIEN : Amoy interior (*Swinhoe* !) ; HUPEH : Ichang, North Patung, Nanto and mountains to the northward (*A. Henry*, 1925, 3879, 7172, 7186 !) ; SHENSI (*Giraldi* ex *Beissner*) ; SZECHUEN (*Szechenyi* ex *Kanitz*), Tchenkeoutin (*Farges* !), North Wushan (*A. Henry*, 7018 !) ; YUNNAN : Mengtze (*A. Henry*, 9100 !), various localities (*Delavay* !). Mus. Brit. ; Mus. Paris. ; Herb. Kew.

Var. **concolor**, *Franchet in Journ. de Bot.* 1899, p. 265.

SZECHUEN : Tchenkeoutin (*Farges* !). Mus. Paris.

3. **Cephalotaxus Mannii**, *Hook. f. in Hook. Ic. Pl.* t. 1523, et *Fl. Brit. Ind.* v. p. 647 ; *Franchet in Journ. de Bot.* 1899, p. 265.

SZECHUEN : Tachienlou (*Prince Henry of Orleans*, ex *Franchet*).

Khasia hills.

4. **Cephalotaxus Oliveri**, *Masters in Bull. Herb. Boiss.* vi. p. 270.

Cephalotaxus Griffithii, *Oliver in Hook. Ic. Pl.* t. 1933, haud *Hook. f. Fl. Brit. Ind.* v. p. 468.

HUPEH : Changyang (*A. Henry*, 7479, 7832, 7843 !) ; SZECHUEN : Mount Omei (*Faber*, 983 !). Mus. Brit. ; Herb. Kew.

5. **Cephalotaxus pedunculata**, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 108, et *Fl. Jap.* ii. p. 67, t. 132 ; *DC. Prodr.* xvi. 2, p. 503 ; *Carrière, Conif.* ed. 2, p. 716 ; *Franchet, Pl. David.* i. p. 292 ; *Franch. et Savat. Enum. Pl. Jap.* i. p. 473 ; *Masters in Gard. Chron.* xxi. 1884, p. 113, et *in Journ. Linn. Soc.* xxii. (1886) p. 201.

Taxus Harringtonia, *Knight* ex *Forbes, Pinet. Woburn.* p. 217, t. 63.

NORTH CHINA : without locality (*Fortune*) ; SHENSI : Tsinling mountains (*David* ex *Franchet*).

Japan.

Var. **fastigiata**, *Carrière, Product. et Fixat. des Variétés Végét.* p. 44, et *in Rev. Hort.* 1863, p. 349, fig. 36; *Carrière, Conif.* ed. 2, p. 717.

Cephalotaxus koraiana, *Hort.* ex *Carrière, Conif.* ed. 2, p. 717.

Podocarpus koreana, *Hort.* ex *Parl. in DC. Prodr.* xvi. 2, p. 516 partim.

Podocarpus koraiana, *Sieb. in Ann. Soc. Hort. Pays-Bas,* 1844, p. 35.

Taxus japonica, *Lodd.* ex *Gord. Pinet.* p. 275.

COREA (ex *Siebold*).

1. **Taxus baccata,** *Linn. Sp. Pl.* ed. 1, p. 1040; *Endl. Synops. Conif.* p. 242; *DC. Prodr.* xvi. 2, p. 500; *Carrière, Conif.* ed. 2, p. 730; *Hook. f. Fl. Brit. Ind.* v. p. 648; *Franchet, Pl. David.* i. p. 293, et *in Journ. de Bot.* 1899, p. 264; *Wall. Tent. Fl. Nep.* p. 44, t. 57.

HUPEH: Fang (*A. Henry,* 6913! "12–20 feet in height, but of large diameter; wood reddish; bark red; timber good"); SHENSI (*David* ex *Franchet*); SZECHUEN: Tchenkeoutin (*Farges*!), North Wushan, at 6000–8000 feet (*A. Henry,* 7097, 7155!). Mus. Brit.; Mus. Paris.; Herb. Kew.

Chinese name, "Houngtocha."

Throughout northern and temperate Europe, Asia, North Africa, and North America.

1. **Torreya grandis,** *Fortune in Gord. Pinet.* ed. 1, p. 326, et *in Gard. Chron.* 1860, p. 170; *DC. Prodr.* xvi. 2, p. 505; *Franchet, Pl. David.* i. p. 292.

CHEKIANG: on the mountains (*Fortune*!); WEST FOKIEN (*David* ex *Franchet,* hb. *Hance,* 22052!). Mus. Brit.; Herb. Kew.

2. **Torreya nucifera,** *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 108, et *Fl. Jap.* ii. p. 64, t. 129; *Endl. Synops. Conif.* p. 240; *DC. Prodr.* xvi. 2, p. 505; *Carrière, Conif.* ed. 2, p. 724; *Franch. et Savat. Enum. Pl. Jap.* i. p. 473.

Torreya Fargesii, *Franchet in Journ. de Bot.* 1899, p. 264.

HUPEH: Nanto and Hsingshan (*A. Henry,* 6346, 6478!); SZECHUEN: North Wushan (*A. Henry,* 7096!), near Tchenkeoutin (*Farges*!). Mus. Brit.; Mus. Paris.; Herb. Kew.

1. **Ginkgo biloba,** *Linn. Mantissa,* ii. p. 313; *Kaempf. Amœn. Exot.* p. 811, cum icone p. 813; *Thunb. Fl. Jap.* p. 358; *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 109, et *Fl. Jap.* ii. p. 73, t. 136;

DC. Prodr. xvi. 2, p. 507; *Carrière, Conif.* ed. 2, p. 711; *Franch. et Savat. Enum. Pl. Jap.* i. p. 474.

Salisburia adiantifolia, *Smith, in Trans. Linn. Soc.* iii. (1797) p. 330; *Bunge, Enum. Pl. Chin. Bor.* p. 62.

Salisburia macrophylla, *K. Koch, Dendrol.* ii. p. 108.

NORTH CHINA: without locality (*Home*! *Bowring*!); SOUTH-WEST CHINA (*Bourne*!); CHIHLI: near Peking (*Alcock*! *Bushell*!): KIANGSU: Shanghai (*Perry*! hb. *Hance*, 13376!); CHEKIANG: Ningpo (*Hancock*, cult.?); YUNNAN: Momyen (*Anderson*!). Mus. Brit.; Herb. Kew.

Cultivated in the vicinity of Buddhist temples.

Mandshuria, Japan.

Mrs. Bishop, the distinguished traveller, writes that she met with several fine specimens of the *Ginkgo* in the magnificent forests which surround the sources of the Great Gold river and the smaller Min, in Western China, and also in the forests of Central Yesso, Japan.

1. **Podocarpus argotænia**, *Hance in Journ. Bot.* xxi. (1883) p. 357.

Podocarpus insignis, *Hemsl. in Journ. Bot.* xxiii. (1885) p. 287.

FORMOSA: South Cape (*A. Henry*, 2075!); KWANGTUNG: Taimo mountains opposite Hongkong (*Westland*!), Lautao Island and Lofaushan (*Ford*!). Herb. Kew.

? 2. **Podocarpus chinensis**, *Wall. Cat.* n. 6051; *Endl. Synops. Conif.* p. 215; *DC. Prodr.* xvi. 2, p. 516; *Carrière, Conif.* ed. 2, p. 658; *Hook. f. Fl. Brit. Ind.* v. p. 649.

Podocarpus Maki, *Sieb. et Zucc. Fl. Jap. Fam. Nat.* ii. p. 108

Podocarpus Makoya, *Hort.* ex *Endl. Synops. Conif.* p. 217.

Podocarpus Makoyæ, *Hort.* ex *Carrière, Conif.* ed. 1, p. 457.

Podocarpus Makoyi, *Hort.* ex *Parl. in DC. Prodr.* xvi. 2, p. 516.

Podocarpus Miquelia, *Hort.* ex *Parl. loc. cit.*

Podocarpus sinensis, *Teijsm. et Binn. Cat. Hort. Bog.* p. 14.

This is a narrow, short-leaved form allied to *P. macrophyllus.* Only cultivated specimens are in the Kew Herbarium.

? 3. **Podocarpus latifolia**, *Wall. Pl. As. Rar.* i. p. 26, t. 30; *Endl. Synops. Conif.* p. 208; *DC. Prodr.* xvi. 2, p. 508; *Hook. f. Fl. Brit. Ind.* v. p. 649.

FORMOSA: Tamsui (*Watters*, 9! *Bourne*, 3!). Herb. Kew.

Native name, "Shan-Sha."

India, Malay Peninsula, and Java.

In the absence of flowers the determination is conjectural.

The species is probably the *Podocarpus Nageia* of Henry, Trans. As. Soc. Japan, xxv., Suppl. p. 90 (*A. Henry*, 403, 1975, 2076).

?4. **Podocarpus macrophylla**, *Wall. Cat.* n. 6052, haud *D. Don*; *Franchet in Journ. de Bot.* 1899, p. 265.

KIANGSI: Kiukiang (*Shearer* ♀ !); FORMOSA (*A. Henry*), Kelung, Harbour Island (*Ford*, 44 ♀); SZECHUEN: Kiating (*Faber*, 986 !); YUNNAN: near Kichau, introduced (*Delavay* ex *Franchet* ?); LUCHU ARCHIPELAGO (*Wright*, 310 !). Mus. Brit.; Herb. Kew.

India.

5. **Podocarpus neriifolia**, *D. Don in Lambert, Pinus*, ed. 1, ii. p. 21; *Endl. Synops. Conif.* p. 215; *DC. Prodr.* xvi. 2, p. 514; *Carrière, Conif.* ed. 2, p. 661; *Hook. f. Fl. Brit. Ind.* v. p. 649; *Fl. des Serres*, viii. p. 49, t. 768.

Podocarpus bracteata, *Blume, Enum. Pl. Jav.* p. 88.

SZECHUEN: Yangtsekiang (*Faber*, 985 ! "Near monasteries, probably planted; lower part of fruit edible, upper part hard").

Cultivated in Hongkong.

India and Malaya.

6. **Podocarpus sutchuenensis**, *Franchet in Journ. de Bot.* 1899, p. 265.

SZECHUEN: Tchenkeoutin (*Farges* ex *Franchet*).

1. **Cunninghamia sinensis**, *R. Br. in Rich. Conif.* p. 80, t. 18. fig. 3; *Sieb. et Zucc. Fl. Jap.* ii. p. 7, t. 103; *Benth. Fl. Hongk.* p. 337; *DC. Prodr.* xvi. 2, p. 432; *A. Murray, Pines & Firs of Japan*, p. 116; *Franchet, Pl. David.* i. p. 291, et *in Journ. de Bot.* 1899, p. 262; *Beissner in Bull. Soc. Bot. Ital.* 1899, p. 311.

Belis jaculifolia, *Salisb. in Trans. Linn. Soc.* viii. (1807) p. 315.
Cunninghamia lanceolata, *Lambert, Pinus*, ed. 2, p. 59, t 37.
Pinus lanceolata, *Lambert, Pinus*, ed. 1, i. p. 52, t. 34.

CHINA: without locality (*Bradley* ! *Staunton* ! *Macartney* ! *Home* ! *Bowring* ! *Reeves* !); KIANGSU: Shanghai (*Maingay* !); CHEKIANG: Ningpo (*Oldham*, 74 !), Taihoo Lake (*Carles* ! *Forbes* !); KIANGSI: Kiukiang (*David*, 919 !); FORMOSA (*A. Henry*); HUPEH: Ichang (*A. Henry*, 9148, 1086 ! "A tree found chiefly in mountain-valleys; its timber is used for planking"); SHENSI (*Giraldi* ex *Beissner*); SZECHUEN: Mount Omei (*Faber*, 886 !); KWANGTUNG: Macao (*Gaudichaud* !); YUNNAN (*Delavay* ex *Franchet*); HONGKONG (*Lamont* ! *Hance*, 424 !). Mus. Brit.; Herb. Kew.

1. **Pinus** (§ **Cembra**) **Armandi**, *Franchet, Pl. David.* i. p. 285, t. 12, et *in Journ. de Bot.* 1899, p. 254; *Beissner in Nuov. Giorn. Bot. Ital.*, n. s. iv. p. 184, t. 5. fig. 2, et *in Bull. Soc. Bot. Ital.* 1899, p. 310.

Shensi (*Giraldi* ex *Beissner*), Tsinling mountains (*David*, 909 !); Szechuen: near Tchenkeoutin (*Farges* !); Yunnan: Mount Heechanmen, near Hokin (*Delavay* !). Mus. Brit.; Herb. Kew.

2. **Pinus Bungeana**, *Zuccarini in Endl. Synops. Conif.* p. 166; *A. Murray, Pines and Firs of Japan*, p. 18, cum icone; *Pinet. Brit.* i. p. 13; *DC. Prodr.* xvi. 2, p. 398; *Carrière, Conif.* ed. 2, p. 434; *Masters in Gard. Chron.* xviii. 1882, p. 8 cum icone, et *in Journ. Linn. Soc.* xviii. (1881) p. 506: *Lavallée, Arboret. Segrez.* p. 111, t. 32.

Pinus excorticata, *Hort.* ex *Lindl. et Gord. in Journ. Hort. Soc.* v. p. 217.

Chihli: Peking (*Bretschneider* ! *Bushell* ! hb. *Hance*, 14700 !); Hupeh: Nanto and mountains to northward (*A. Henry*, 3274 !); North Shensi: on the mountains (*Giraldi* ex *Beissner*). Mus. Brit.; Herb. Kew.

3. **Pinus densiflora**, *Sieb. et Zucc. Fl. Jap.* ii. p. 22, t. 112; *DC. Prodr.* xvi. 2, p. 388; *A. Murray, Pines and Firs of Japan*, p. 32; *Engelm. Revis. Genus Pinus, in Trans. Acad. Sc. St. Louis*, iv. p. 178, note 10; *Mayr, Monogr. Abiet. Jap.* p. 72, t. 5. fig. 17, t. 6, t. 7. fig. 5; *Franchet in Journ. de Bot.* 1899, p. 253; *Sargent, Silva*, xi. p. 7, adnot.; *Beissner in Bull. Soc. Bot. Ital.* 1899, p. 309.

Chihli: hills west of Peking (*Fortune* ! *Williams* !); Shensi (*Giraldi* ex *Beissner*); Szechuen: South Wushan (*A. Henry*, 5327 A ?), near Tchenkeoutin (*Farges* !); Yunnan: Mengtze, at 7000 feet (*A. Henry*, 10519 ! "tree forty feet high"); Corea: West coast (*Perry*, 40 ? "This stunted tree covers the hills and is kept closely cut for firewood, so that it rarely reaches more than from 1–2 feet in height in clusters of small branches"), Chemulpo (*Carles* !); Corean Archipelago (*Oldham*, 806 !). Mus. Brit.; Mus. Paris.; Herb. Boissier; Herb. Kew.

Japan.

Var. tabuliformis, *Fortune MSS. in Mus. Kew. An Carrière, Conif.* ed. 2, p. 510?

North China: without locality (*Daniell* !); Chihli: near Peking (*Fortune* ! "A flat-headed tree, somewhat like an old cedar").

In the Kew Museum there are two cones with foliage, one of which is decidedly like *P. densiflora*, while in the other the cone-scales are not so flat, but more convex, as is the case with a specimen from Dr. Daniell in the British Museum.

4. **Pinus Henryi**, *Masters*, n. sp.

Arbor 15–30-ped. alta (*Henry*), ramulis glabris fuscis cicatricibus prominentibus asperatis. *Folia* gemina, 3-pollicaria linearia, acuta, canaliculata, margine serrulata, utrinque stomatifera, canalibus resiniferis epidermidi proximis; vaginæ semipollicares e squamis membranaceis fuscis margine albido lacerato-fimbriatis sensim increscentibus demum deciduis, constantes. *Gemmæ* ovoideo-conicæ, perulis subcoriaceis castaneis lanceolato-acuminatis apice recurvis ad margines lacerato-fimbriatis. *Flores* masculini ignoti. *Strobili* laterales, brevissime stipitati, 16–18 lin. longi, 9–10 lin. lati, ovoidei, squamarum apophysi pallide fusca convexa obscure pentagona lineisque 5 ad apicem convergentibus plus minusve prominentibus notata, antice rotundata lobulata, umbone depresso transversim elliptico mucronato. *Semina* ovoidea, purpureo-maculata, superne ala membranacea purpurascente late falciformi munita.

HUPEH: Fang (*A. Henry*, 6909 !). Herb. Kew.

This Pine has a cone very like that of *P. densiflora*, but the resin-canals are placed immediately within the epidermis, while in the true *P. densiflora* they are in the substance of the mesophyll.

5. **Pinus koraiensis**, *Sieb. et Zucc. Fl. Jap.* ii. p. 28, t. 116; *Endl. Synops. Conif.* p. 140; *A. Murray, Pines and Firs of Japan*, p. 1, cum icone; *DC. Prodr.* xvi. 2, p. 404; *Carrière, Conif.* ed. 2, p. 385; *Franch. et Savat. Enum. Pl. Jap.* i. p. 465; *Mayr, Monogr. Abiet. Jap.* i. p. 73, t. 5–6, fig. 18: *Masters in Bull. Herb. Boiss.* vi. p. 269; *Beissner in Bull. Soc. Bot. Ital.* 1899, p. 310.

SHENSI: various localities (*Giraldi* ex *Beissner*); COREA: West Coast, Chemulpo (*Carles* !). Mus. Brit.; Herb. Boissier; Herb. Kew.

Mandshuria, Japan.

In the absence of any adequate material of *P. koraiensis* in the Kew Herbarium the determination of specimens is doubtful. The cone figured by Zuccarini, *l. c.*, represents one of *P. parviflora*. The mistake was detected, and another figure was intended to have been substituted; but this intention was not carried out (*A. Murray*).

6. **Pinus luchuensis,** *Mayr in Sitzungsber. Bot. Vereins München,* März 12, 1894.

LUCHU ARCHIPELAGO (*Mayr*).

I have not seen this species.

7. **Pinus mandshurica,** *Ruprecht in Bull. Phys. Math. Acad. St. Pétersb.* xv. (1857), p. 382; *A. Murray in Pinet. Brit.* i. p. 61.

? Pinus cembra β pumila, *Pallas ex Parl. in DC. Prodr.* xvi. 2, p. 403.

YUNNAN: Mengtze (*A. Henry*, 9868!).

Mandshuria.

Under n. 5327 Dr. Henry collected at Hupeh a pine, belonging to the section Cembra, with parenchymatous resin-canals, but which appears to differ from *Pinus mandshurica,* and is described as a tree 30 feet high, with white bark, and giving off branches horizontally. It is allied to *P. koraiensis*; but in the absence of female flowers and cones it is advisable merely to mention it.

8. **Pinus Massoniana,** *Lambert, Pinus,* ed. 1, p. 17, t. 12, et ed. 2, p. 16, t. 8; *Endl. Synops. Conif.* p. 174; *DC. Prodr.* xvi. 2, p. 389; *Engelm. Revis. Gen. Pinus, in Trans. Acad. Sc. St. Louis,* iv. p. 180; *Kanitz, Pl. Exped. Szech.* p. 64; *Beissner in Bull. Soc. Bot. Ital.* 1899, p. 310, nec *D. Don,* nec *Sieb. et Zucc.*, nec *Hort.*

Pinus sinensis, *Benth. Fl. Hongk.* p. 337, certe; *Lambert, Pinus,* ed. 2, t. 29; *Endl. Synops. Conif.* p. 158; *Forbes, Pinet. Woburn.* p. 39, t. 12, dubie.

CHINA: without locality (*Masson*; "e seminibus chinens. strobilis parvis *P. silvestris* instar," *Lambert,* in herb. Banks!, *Fortune,* 51!); KIANGSU: Shanghai (*Maingay,* 340!); CHEKIANG: Ningpo (*Home*!); CHUSAN ARCHIPELAGO (*Home*!); KIANGSI (*Staunton*!); FORMOSA (*Oldham,* 554! *A. Henry*); HUPEH: Ichang (*A. Henry,* 1212, 3275!); NORTH SHENSI: on the mountains (*Giraldi* ex *Beissner*); YUNNAN (*Szechenyi,* 248, ex *Kanitz*), Mengtze (*A. Henry,* 11380!); HONGKONG (*Hance,* 732, 8277! *Wright,* 471! *Hinds*! *Lamont,* 726! *Faurie,* 15844!); SOUTH CHINA: without locality (*Seemann,* 2404!). Mus. Brit.; Herb. Boissier; Herb. Kew.

Japan.

Var. **planiceps,** *A. Murray MSS. in Mus. Brit.*

SHANTUNG (*Fortune,* 52! *Perry,* 81!).

"A flat-headed pine different from *P. sinensis* (*Massoniana*)."—*Fortune.*

The leaf-section and cone of Fortune's specimen are like those of the true *Pinus Massoniana.*

Pinus Massoniana was figured and described by Lambert in 1803, from a specimen brought home by Masson from the Cape, where it had been grown from Chinese seeds. The type specimen is in the British Museum, and bears foliage and male flowers. It is very distinct from the *P. Massoniana* of Siebold and Zuccarini, a Japanese plant. Whether or not it is distinct from *Pinus sinensis,* also of Lambert, is open to question. Lambert described and figured this latter plant in his second edition, not published till 1832, and then only from a Chinese drawing, so that there is no type specimen in existence. The drawing shows a plant with shorter leaves and with flatter cone-scales than in the true *P. Massoniana.* Bentham adopts the name *sinensis* for the long-leaved Chinese form; but, in that case, the type specimen, figure, and description of *Massoniana,* dating from 1803, must be ignored in favour of a name given thirty years later, and of which no type exists in herbaria.

What Siebold and Zuccarini, and Murray, meant by *P. Massoniana* is a very different tree, called by Parlatore *P. Thunbergii.* In living collections, as well as in books and herbaria, great confusion exists between *P. Massoniana, sinensis, densiflora,* and *Thunbergii.* The confusion is heightened by the existence of one, or perhaps two, dwarf varieties, which it is difficult to assign to their proper species, and one of which may, perhaps, ultimately be ranked as a distinct species. The true *P. Massoniana,* with long slender leaves, seems to be exclusively Chinese, if not entirely South Chinese.

The var. *planiceps* may be a stunted form of *P. Massoniana,* kept dwarf by being persistently cut for firewood, or continually browsed, as in the case of some other species.

9. **Pinus scipioniformis,** *Masters in Bull. Herb. Boiss.* vi. p. 270.

HUPEH (*A. Henry*!). Herb. Boissier.

10. **Pinus Thunbergii,** *Parl. in DC. Prodr.* xvi. 2, p. 388; *Engelm. Revis. Genus Pinus, in Trans. Acad. Sc. St. Louis,* iv. p. 182, note 26; *Franchet, Pl. David.* i. p. 285; *Masters in Journ. Linn. Soc.* xviii. (1881) p. 504; *Mayr, Monogr. Abiet. Jap.* p. 69, t. 5. fig. 16 et t. 7. fig. 1; *Franchet in Journ. de Bot.* 1899, p. 253; *Sargent, Silva,* xi. p. 7, adnot.

Pinus sylvestris, *Thunb. Fl. Jap.* p. 274, non *Linn.*

Pinus Massoniana, *Sieb. et Zucc. Fl. Jap.* ii. p. 24, t. 113; *Murray, Pines and Firs of Japan*, p. 23, excl. syn., haud *Lambert.*

Pinus densiflora, *Hort.* haud *Sieb. et Zucc.*

NORTH CHINA (*Williams*! *Hance*, 1448! "cauda equina"); CHIHLI: Peking (*Bretschneider*!); SHINGKING: Jaoling (*Ross*, 420!); NORTH SHENSI: on the mountains (*Giraldi* ex *Beissner*); SZECHUEN: Hankise, and near Tchenkeoutin (*Farges*!); YUNNAN: Mount Hoalongchan (*Delavay*!); COREAN ARCHIPELAGO (*Oldham*, 810!). Mus. Brit.; Mus. Paris.; Herb. Boissier; Herb. Kew.

Mongolia and Japan.

A specimen from the Luchu Archipelago (*Wright*, 311!) may belong to this species. The leaves are 6 inches long, the resin-canals parenchymatous, not peripheral as in *P. Massoniana*, the cones lateral, ovoid-conic, 1½ in. long, the scales with very flat pentagonal apophysis and depressed umbo. It resembles somewhat the figure of Lambert's *P. sinensis*, but may prove distinct.

11. **Pinus yunnanensis**, *Franchet in Journ. de Bot.* 1899, p. 253.

YUNNAN: in woods above Tapintze (*Delavay*, 569, ex *Franchet*).

1. **Picea ajanensis,** *Fisch.* ex *Trautv. et Mey. in Middendorff's Reise* (*Fl. Ochot.* p. 87); *Masters in Journ. Linn. Soc.* xviii. (1881) p. 508; *Mayr, Monogr. Abiet. Jap.* p. 53, t. 4. fig. 10.

HUPEH: Fang (*A. Henry*, 6908!); SZECHUEN: North Wushan (*A. Henry*, 7074 A, 7157!). Herb. Kew.

Japan.

? 2. **Picea Alcockiana**, *Carrière, Conif.* ed. 2, p. 343; *Masters in Journ. Linn. Soc.* xviii. (1881) p. 508, *et in Gard. Chron.* Ser. 3. xiii. (1880) p. 212, cum icone.

Specimens collected by the Abbé David and Dr. Henry are probably referable to this species, but the specimens are insufficient to enable us to decide on the point.

Mongolia and Japan.

3. **Picea brachytila,** *Masters.*

Abies brachytila, *Franchet in Journ. de Bot.* 1899, p. 258.

SZECHUEN: Tchenkeoutin (*Farges*, 806!); YUNNAN: Mount Maeulchan (*Delavay*, 4129!). Mus. Paris.

This is nearly allied to *P. Alcockiana*, Carrière.

4. **Picea likiangensis**, *Masters.*

Abies likiangensis, *Franchet in Journ. de Bot.* 1899, p. 257.

YUNNAN: Likiang, at 8200 feet (*Delavay*, 1031!). Mus. Paris.

? 5. **Picea Maximowiczii**, *Regel, Ind. Sem. Hort. Petrop.* 1865, p. 33; *Carrière, Conif.* ed. 2, p. 347; *Masters in Gard. Chron.* Ser. 3. xiii. (1880) p. 363.

It is possible that A. Henry's 6823, collected at Fang, in the province of Hupeh, belongs to this obscure species.

Japan.

6. **Picea obovata**, *Ledeb. Fl. Alt.* iv. p. 201.

Var. **Schrenkiana**, *Masters in Journ. Linn. Soc.* xviii. (1881) p. 506.

Picea Schrenkiana, *Fisch. et Mey. in Bull. Sc. Acad. Pétersb.* x. 1842, p. 253 aliorumque.

Abies Schrenkiana, *Lindl. et Gord. in Journ. Hort. Soc.* v. (1850) p. 212; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 58; *Kanitz in Pl. Exped. Szech.* p. 64.

CHIHLI: on Fengtai, near Peking (*Bretschneider*!). Herb. Kew.

Songaria.

Subvar. **Loczyi**, *Kanitz in Pl. Exped. Szech.* p. 64.

YUNNAN (*Szechenyi*, 247, ex *Kanitz*).

1. **Keteleeria Davidiana**, *Beissner, Handb. der Nadelholzkunde*, p. 425, fig. 117; *Van Tiegh. in Bull. Soc. Bot. France*, 1891, p. 411.

Abies Davidiana, *Franchet, Pl. David.* i. p. 288, t. 13, et *in Journ. de Bot.* 1899, p. 260.

Pseudotsuga Davidiana, *Bertrand in Ann. Sc. Nat.* 5me sér. xx. (1874) p. 86.

HUPEH: Nanto and mountains to the northward, and South Tunghu (*A. Henry*, 3276, 3878, 3878 A, 7576!); SZECHUEN: without locality (*Farges* ex *Franchet*), North Wushan (*A. Henry*, 7098!), Lonnganfou mountains (*David* ex *Franchet*); YUNNAN: above Tapintze (*Delavay* ex *Franchet*), Mengtze mountains, (*A. Henry*, 10744, 10744 A, 11345, 11358!). Herb. Kew.

[*Flores* masculi (a cl. Franchet indescripti) in umbellas seu fasciculos axillares basi squamis perulatis coriaceis obtectis secus ramos dispositis, singuli, erecti, obtusi, cylindrati, 5 lin. long. *Antheræ* oblongæ, obtusæ, aurantiacæ, transverse dehiscentes pollinis grana ut in *Pino.*]

Keteleeria sacra, Beissner, Handb. der Nadelholzkunde, p. 426 (*Abies sacra*, Franchet, Pl. David. i. p. 288, t. 14), collected by David in Shensi, too closely resembles the preceding species to be retained as distinct. It is said to be planted around the temples.

2. **Keteleeria Fabri**, *Masters*, n. sp.

Rami brunnei, hornotini glabrescentes, pulvinis prominentibus notati; cicatrices orbiculares. *Folia* in ramis fertiles 10 lin. longa, 1 lin. lata, sursum curvata, basi torta vix angustata, lineari-obtusa, superne nitida, sulco longitudinali medio percursa, subtus inter margines arcte revolutas et nervum prominentem argenteo-fasciata, apice rotundata vel vix emarginata. *Alabastra* subglobosa, perulis coriaceis puberulis acuminatis tecta. *Flores* masculini haud visi. *Strobili* juniores 25 lin. longi, 15 lin. lati, erecti, purpurascentes, oblongo-obtusi, stipite brevi squamis obtecto, sublevati. *Bracteæ* purpurascentes, rotundatæ, lacero-trilobæ, medio in acumen lineare squamam primo superans productæ. *Squamæ* apice integræ, rotundatæ.

SZECHUEN: Mount Omei (*Faber*, 984!). Herb. Kew.

3. **Keteleeria Fortunei**, *Carrière in Rev. Hort.* 1866, p. 449, *et Conif.* ed. 2, p. 260; *Pirotta in Bull. Soc. Tosc. Ort.* 1887 p. 269.

Pinus Fortunei, *Parl. in DC. Prodr.* xvi. 2, p. 430.

Abies Fortunei, *Hance in Journ. Bot.* xx. (1882) p. 39; *Masters in Journ. Linn. Soc.* xxii. (1886) p. 197, cum icone.

Abies (Picea) Fortunei, *Murray, Pines and Firs of Japan*, p. 49, cum icone.

Abies jezoensis, *Lindl. in Lindl. et Paxt. Fl. Gard.* i. p. 42, fig. 26, haud *Sieb. et Zucc.*

Pseudotsuga jezoensis, *Bertrand in Ann. Sc. Nat.* 5me sér. xx. (1874) p. 87.

FOKIEN: Foochow (*Fortune*, 50! hb. *Hance*, 17878! *Carles*, 714!). Mus. Brit.; Herb. Kew.

Van Tieghem in Bull. Soc. Bot. France, 1891, p. 411, assigns anatomical reasons for the establishment of this genus in addition to the morphological characters derived from the male flowers, etc.

To the above may be added the description of a new species only known from a dried specimen received from the Hongkong Botanical Gardens:—

Keteleeria, n. sp.

Rami grisei, cicatricibus orbicularibus instructi. *Ramuli* strobiliferi setosi. *Folia* 12 lin. longa, 1½ lin. lata, lineari-oblonga, obtusa, coriacea, nitida, nervo medio superne per totam longitudinem prominente, subtus autem versus basin tantum elevato, marginibus revolutis. *Flores* masculini in fasciculos laterales basi squamis membranaceis patentibus suffultos dispositi, singuli stipitulati, lineari-oblongi, obtusi, 5 lin. longi, 1½ lin. lati; *antheræ* obtusæ. *Pollen* ut in *Pino*. *Strobili* juniores ramulis brevibus setosis, basi perulatis impositi, erecti, 22 lin. longi, 9 lin. lati, oblongi, acuti, purpurascentes. *Bracteæ* appressæ, olivaceæ, apice laceratæ, trilobæ, lobo medio in acumen foliaceum deltoideum erectum protenso. *Squamæ* purpurascentes, rotundatæ, stomatibus instructæ.

HONGKONG: cultivated in the Botanic Garden (*Ford*, 386!). Herb. Kew.

1. **Tsuga Brunoniana**, *Carrière, Conif.* ed. 1, p. 188; *Hook. f. Fl. Brit. Ind.* v. p. 654.

Abies dumosa, *Loud. Arb. Brit.* iv. p. 2325, fig. 2233 et 2234.

Var. **chinensis**, *Franchet in Journ. de Bot.* 1899, p. 258.

SZECHUEN: Tchenkeoutin (*Farges* ex *Franchet*); YUNNAN: Mosoyn (*Delavay* ex *Franchet*).

2. **Tsuga chinensis**, *Masters.*

Abies chinensis, *Franchet in Journ de Bot.* 1899, p. 259.

SZECHUEN: Tchenkeoutin (*Farges* ex *Franchet*).

3. **Tsuga Sieboldii**, *Carrière, Conif.* ed. 1, p. 186.

Abies Tsuga, *Sieb. et Zucc. Fl. Jap.* ii. p. 14, t. 106; *Franchet, Pl. David.* i. p. 287; *Franch. et Savat. Enum. Pl. Jap.* i. p. 468; *Mayr, Monogr. Abiet. Jap.* p. 59, t. 4. fig. 12.

HUPEH: Nanto and mountains to the northward, and Fang (*A. Henry*, 987, 6907!); SHENSI: Tsinling mountains (*David* ex *Franchet*); SZECHUEN: North Wushan (*A. Henry*, 7156, 8896!). Herb. Kew.

Japan.

[The *Abies*, n. 918, of Franchet's Pl. David. i. p. 290, probably belongs here.]

√ 4. **Tsuga yunnanensis**, *Masters.*

Abies yunnanensis, *Franchet in Journ. de Bot.* 1899, p. 258.

YUNNAN: Yanginchan and Likiang (*Delavay* ex *Franchet*).

1. **Abies Delavayi**, *Franchet in Journ. de Bot.* 1899, p. 255.

YUNNAN: Mount Tsangchan, above Tali (*Delavay*). Mus. Paris.

2. **Abies Fargesii**, *Franchet in Journ. de Bot.* 1899, p. 256.

SZECHUEN: mountains in the neighbourhood of Tchenkeoutin (*Farges*!). Mus. Paris.

Var. **sutchuenensis**, *Franchet in Journ. de Bot.* 1899, p. 256.

SZECHUEN, with the preceding (*Farges*!). Mus. Paris.

3. **Abies firma**, *Sieb. et Zucc. Fl. Jap.* ii. p. 15; *Lindl. et Gord. in Journ. Hort. Soc.* v. (1850) p. 210; *Carrière, Conif.* ed. 2, p. 286; *Masters in Journ. Linn. Soc.* xviii. (1881) p. 514; *Franch. et Savat. Enum. Pl. Jap.* i. p. 467; *Kanitz, Pl. Exped. Szech.* p. 64.

Abies holophylla, *Maxim. in Bull. Acad. Pétersb.* x. (1886) p. 487.
Pinus holophylla, *Parl. in DC. Prodr.* xvi. 2, p. 424.
Abies Momi, *Sieb.* ex *Sargent, Silva,* xii. p. 101, adnot.
Abies chensiensis, *Van Tiegh. in Bull. Soc. Bot. Fr.* 1891, p. 413?

SHENSI (*David*!); YUNNAN (*Szechenyi* ex *Kanitz*); COREA (*Veitch*! sterile branch only). Herb. Kew.

Mandshuria, Japan.

Van Tieghem, *l. c.*, describes the *A. chensiensis* from the anatomical structure of the leaf only, which is that of *A. firma*, but not that of *Keteleeria*, under which genus it is mentioned by Beissner in his Handbuch, p. 426.

The specimen in the Paris Herbarium labelled *A. chensiensis*, Franchet manuscript, is probably the same as Van Tieghem's plant, and is referable to *A. firma*.

4. **Abies Veitchii**, *Lindl. in Gard. Chron.* 1861, p. 23; *Masters in Gard. Chron.* Ser. 3. xiii. (1880) p. 275, et *in Journ. Linn. Soc.* xviii. (1881) pp. 485 et 515, t. xx.; *Franch. et Savat. Enum. Pl. Jap.* i. p. 468; *Sargent, Silva,* xii. p. 101, adnot.

Picea Veitchii, *Murray in Proc. Hort. Soc.* ii. (1862) p. 347.
Pinus selenolepis, *Parl. in DC. Prodr.* xvi. 2, p. 427.
Abies nephrolepis, *Maxim. in Bull. Acad. Pétersb.* x. (1866) p. 486.

KANSUH: Peling mountains, at 9800 feet (*Giraldi* ex *Beissner*).

Mandshuria, Japan.

1. **Pseudolarix Fortunei,** *Mayr, Monogr. Abiet. Jap.* p. 99.

Abies Kaempferi, *Lindl. in Gard. Chron.* 1845, p. 255 et 1855, p. 654, cum icone; *Murray, Pines and Firs of Japan,* p. 100, cum icone; *Fortune in Gard. Chron.* 1860, p. 170.

Pseudolarix Kaempferi, *Gord. Pinet.* p. 292; *Masters in Gard. Chron.* Ser. 3. xxi. (1884) p. 584, figs. 112 et 113, et *in Journ. Linn. Soc.* xxii. (1886) p. 209, fig. 32; *Van Tiegh. in Bull. Soc. Bot. Fr.* 1891, p. 411.

Larix Kaempferi, *Carrière in Fl. des Serres*, 2^{me} sér. i. p. 97; *Franchet, Pl. David.* i. p. 286.

CHEKIANG (*Fortune*!); KIANGSI: Kiukiang (*David*, 910, ex *Franchet*). Herb. Kew.

Mayr, *l. c.*, points out, as Murray had done previously, that Kaempfer's plant is of Japanese origin and identical with *Larix leptolepis*. He therefore proposes to attach Fortune's name to the Chinese plant, of which he was the discoverer, and which is different from the true larches.

1. **Larix chinensis**, *Beissner in Mitteil. Deutsch. Dendr. Ges.* 1896, p. 68, et *in Nuov. Giorn. Bot. Ital.*, n. s., iv. p. 183, t. 5.

NORTH SHENSI: Mount Kouantousan and Mount Thaepeisan, at 9800 feet (*Giraldi* ex *Beissner*).

2. **Larix davurica**, *Turcz. in Bull. Soc. Nat. Mosc.* 1838, p. 101; *Trautv. Pl. Imag. Fl. Russ.* 1844, p. 48, t. 32; *Carrière, Conif.* ed. 2, p. 351; *Hance in Journ. Bot.* xiii. (1875) p. 138; *Maxim. in Bull. Soc. Nat. Mosc.* 1879, p. 58.

CHIHLI: Mount Pohuashan (hb. *Hance*, 14480 !). Mus. Brit.; Herb. Kew.

Mandshuria.

3. **Larix Griffithii**, *Hook. f. et Thoms. in Hook. f. Ill. Himal. Pl.* t. 21; *Hook. f. Fl. Brit. Ind.* v. p. 655; *Gard. Chron.* Ser. 3. xxv. (1886) p. 718, fig. 157, et xxvi. (1886) p. 465, fig. 95; *Sargent, Silva*, xii. p. 3, adnot.

Abies Griffithiana, *Lindl. et Gord. in Journ. Hort. Soc.* v. (1850) p. 214.

Pinus Griffithiana, *Parl. in DC. Prodr.* xvi. 2, p. 411.

WEST SZECHUEN: Tachienlou, at 9000–13,000 feet (*Pratt*, 782 !). Herb. Kew.

Eastern Nepal, Sikkim, and Bhotan.

4. **Larix Potanini**, *Batalin in Act. Horti Petrop.* xiii. p. 385.

SZECHUEN: Kam, between Tachienlou and Dshido (*Potanin* ex *Batalin*).

5. **Larix sibirica**, *Ledeb. Fl. Altaic.* iv. p. 204; *Franchet, Pl. David.* i. p. 287.

CHIHLI: Peking (*David* !).

Mongolia, Mandshuria.

6. **Larix thibetica**, *Franchet in Journ. de Bot.* 1899, p. 262.

SZECHUEN: Tachienlou (*Prince Henry of Orleans!*), Tongolo mountains (*Soulié*, 292!). Herb. Paris.

[In addition to the foregoing species of *Larix*, mention may be made of a species of which only the cone is described in Franchet's 'Plantæ Davidianæ,' sub n. 912, in the following terms:—"Strobili 3–4 cent. long., circiter 15 mill. lat., cylindracei obtusi; squamæ e basi cuneata rotundatæ margine integro: bracteæ ovato-lanceolatæ integræ squamas æquantes. Pro ceteris arbor ignota.

CHENSI MERIDIONAL dans les hautes montagnes."

An *P. chinensis*, Beissner?]

132. CYCADACEÆ.

(By Sir W. T. THISELTON-DYER.)

1. **Cycas revoluta**, *Thunb. Fl. Jap.* p. 229; *A. DC. Prodr.* xvi. 2, p. 526; *Lamarck, Encycl.* ii. p. 232; *Franch. et Savat. Enum. Pl. Jap.* i. p. 475; *Smith in Trans. Linn. Soc.* vi. (1802) p. 312, tt. 29, 30; *Bot. Mag.* tt. 2963, 2964.

Cycas inermis, *Loureiro, Fl. Cochinch.* p. 632.

FORMOSA (*G. Phillips!*); YUNNAN (*Chi-wu*, xxxvi. p. 43); KWANGSI: Lungchow (*H. B. Morse!*); KWANGTUNG: Swatow (male plant, *G. Phillips!*), without locality (*Dr. C. Wenyon!*); LUCHU ARCHIPELAGO: Harbour Island ("cultivated agriculturally in great quantities," *Lieut. Alfred Carpenter!*). Herb. Kew.

Japan (spontaneous only in Southern Island, *Franch. & Savat.*). Tonkin (on calcareous rocks at Haiphong, *Balansa*).

"This tree, much cultivated in China as an ornamental plant, bears at Peking the popular name *T'ie-shu* (iron tree)," Bretschneider, Study and Value of Chinese Bot. Works, p. 43. The Lungchow plant is a reduced form which grows in clefts of rocks; that from the Luchu Archipelago has glabrescent carpophylls. *C. inermis* only differs in its unarmed petioles.

2. **Cycas Rumphii**, *Miq. in Bull. Sc. Phys. et Nat. Néerl.* 1839, p. 45; *A. DC. Prodr.* xvi. 2, p. 527; *Dyer in Hook. f. Fl. Brit. Ind.* v. p. 657.

KWANGTUNG: Swatow (*G. Phillips!*). Hort. Kew.

Var. **bifida**, *Dyer.* Folia ad 9 ped. longa, petiolus armatus, pinnulæ ad 15 poll. longæ, ad basin bifidæ, segmenta 1 poll. lata.

KWANGSI: Lighthouse Pagoda rock-hills (*H. B. Morse* !). Herb. Kew.

I include (*Hook. f. Fl. Brit. Ind.* v. p. 657) under *C. Rumphii* the Asiatic forms from the Andamans eastward. I conjecture therefore that Hancock's Hainan plant (*C. circinalis* teste *Maximowicz in litt.*), and that which according to Hance (teste *Bretschneider*) "grows wild in Formosa," belong to it.

[*Zamia tonkinensis*, Lind. & Rod. Ill. Hort. xxxii. (1885) t. 547; *Cycas tonkinensis*, Dyer, in Gard. Chron. Ser. 3. xxiii. (1885) p. 694, from Tonkin, is probably a form with undulate pinnules.]

3. **Cycas siamensis**, *Miq. in Bot. Zeit.* 1863, p. 334; *A. DC. Prodr.* xvi. 2, p. 528; *Kurz. For. Fl. Brit. Burm.* ii. p. 503; *Dyer in Hook. f. Fl. Brit. Ind.* v. p. 657; *Ill. Hort.* xxviii. (1881) t. 433.

YUNNAN: Szemao, forests 4000–5000 ft. (*A. Henry* !). Herb. Kew.

Burma, Siam, Cochin China.

Closely allied to *C. pectinata*, Griff. (*Kurz, l. c.* p. 503; *Dyer, l. c.* p. 657), and perhaps only a southern geographical form; it has usually shorter stems often swollen at the base. Plants have been introduced in quantity from the island of Pulo Condor into European horticulture and sold under various names, amongst others of *C. Boddami* which (*Dyer, l. c.* p. 656) is a reduced form of *C. circinalis* from S. India. I suspect *C. Bellefonti*, Lind. & Rod. (*Ill. Hort.* xxxiii. (1886) t. 586), from Tonkin to be *C. siamensis.*

4. **Cycas taiwaniana**, *Carruthers in Journ. Bot.* xxxi. (1893) p. 2, t. 331.

? FORMOSA: without locality (*Swinhoe* !); ? FOKIEN: Amoy (*Swinhoe*); KWANGTUNG: Swatow (*G. Phillips* !), Lofaushan, 600 ft. (*Ford* !). Mus. Brit.; Herb. Kew.

Tonkin.

Carruthers states (*l. c.*) "that the specimens were collected in the island of Formosa by Mr. Swinhoe, and sent to Dr. Hance in the autumn of 1867 . . . . on which the species is founded."

In the Kew Herbarium there is a single carpophyll of this species accompanied by a letter from Swinhoe written from Amoy, Aug. 21, 1867, in which he says:—"The Chinese call it the *Hai-te-koe* or Sea-iron fowl (sea-iron is the name given to the coral submarine trees), and use it to flavour tea. They tell me it is found in freshwater wells, but it is so rare here that I have not been able to ascertain how it grows, and whether the leaf constitutes the whole plant."

The Kew Herbarium also contains further copious specimens received from Swinhoe in 1867, and like those in the Hance Herbarium simply localised as Formosa.

Mr. T. Watters, H.B.M. Consul at Tamsui, wrote in 1881:—"My impression is that Mr. Swinhoe got his specimens at Takow . . . . . I remember that when I was serving under Mr. Swinhoe at that place we had several conversations about a *Cycas* which then grew abundantly on Saracen's Head at the entrance of the harbour. That was in 1885, and since then the Chinese have altered the flora of the place very much by cutting down everything for the erection of a fort and the construction of roads."

Mr. G. Phillips, H.B.M. Consul at Takow and afterwards at Swatow, took much trouble to find Swinhoe's plant. He eventually discovered it in 1883 "on the hills 60 miles from Swatow" and sent specimens to Kew. He wrote:—"I am inclined to think that the *Cycas* obtained from Mr. Swinhoe came from Swatow, as one constable tells me that on several occasions he collected specimens of plants and sent them to Mr. Swinhoe." Subsequently he wrote:—"I cannot say whether the *Cycas* I sent from here does grow in Formosa. I never saw one whilst there. The country has been much stripped, and the spot, Saracen's Head, referred to by Mr. Watters is now built on to a great extent." Mr. Phillips also stated that on the mainland "it is much sought after by the rich to put in their gardens."

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TO

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RULES FOR BORROWING BOOKS FROM THE LIBRARY.

As amended by the Council, 15th March, 1888.

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1. No more than Six volumes shall be lent to one person at the same time without the special leave of the Council or one of the Secretaries.

2. All books shall be returned before the expiration of Six weeks from the time of their being taken out, but if not required by any other Fellow, they may, *on application*, be kept for a further period of Six weeks.

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Papers read after the middle of January and before the end of April are published on **1st July.**

Papers read in May and June are published on **1st November.**

NOTICE.

THIS Part completes Vol. XXVI.

Vol. XXXV. is still in course of issue, the Parts already published being Nos. 242–245.

Attention to this announcement is specially requested, to prevent application to the Librarian for unpublished Parts.

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